Oil, Paint and Drug Reporter

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1911 REVIEW OF THE TRADES REPRESENTED BY THE REPORTER

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NEW YORK, FEBRUARY 26, 1912.
PART 2.
Index to Contents, Page —.

SUPPLEMENTARY EDITION TO THE REPORTER.

Our readers are presented this morning with our comprehensive annual resume of the markets and trades which the Reporter represents for the year which ended December 31, 1911.

This review has been carefully compiled and contains not only all of the principal happenings of interest in these industries during the year, but a wealth of valuable statistical information. The extent and value of this special number as a reference work has, as usual, caused it to be published in separate form for convenience of preservation.

The year of 1911 was a particularly interesting one in legislative matters and our review of the chief incidents, the variety of new laws enacted and proposed, the investigation into the troubles of the Bureau of Chemistry of the Department of Agriculture will be found interesting and useful. Many of the measures which have been introduced in Congress are of far-reaching importance and there was never a time when the industries were more busy defending themselves against proposed legislation which they believe would prove harrassing.

Following the legislative record will be found a concise review of the primary markets both domestic and foreign in which our readers are interested. Petroleum, drugs, chemicals, animal and vegetable oils, paints, varnishes, naval stores, dyestuffs and fertilizer materials are all treated in a comprehensive manner, with statistical tables of the movement and prices of the various products that will be found well worth preservation.

Expressions upon the year's business by many leaders in the industries treated will be found a particularly interesting feature of the Review.

There are also reviews of the leading foreign markets of the world in which the readers of the Reporter are interested.

There will also be found comprehensive tables of the imports and exports of the year ending June 30, 1911, and comparisons with the previous four years.

FEDERAL RELATIONS WITH THE TRADES.

No review of the domestic and international trade of the United States as affecting the lines of commerce and industry in which readers of the Reporter are interested would be complete, which did not deal fully with and emphasize specifically the:—

1. Relations of the United States tariff and proposed amendments thereto, and the complaints of discriminations against the trade and other interests of the United States in foreign countries.

2. The controversy which existed during the greater part of the year between the United States and Germany over American purchases of potasr from the deposits of that product in German mines, and the incidental complaints which arose therefrom throughout the United States about unjust discriminations and unfair treatment by the German Government, through its laws, against American investments and general interests in Germany.

3. The so-called "Wiley controversy" which involved the details of the operations under the Pure Food and Drugs law, together with the issues that have arisen in the department in connection with that law, the creation of the Remsen board, the personal differences which arose between Drs. Wiley and Dunlap and Solicitor McCabe, as members of the Pure Food Board; Drs. Kebler and Bigelow, of the Bureau of Chemistry, and H. H. Rusby, of New York, as a consulting expert in the variety of matters participated in by these officials in the work of the department connected with the Pure Food and Drugs law.

4. The great diversity of court decisions and departmental rulings which have operated either to strengthen or weaken various provisions of the Pure Food and Drugs Act. In connection with these propositions there developed during the year a great number of decisions and plans for remedying defects alleged to exist in the laws, as those defects were pointed out by the court decisions, and the efforts that have been made through departmental rulings, changes of policies and such suggestions for legislation as would be helpful, according to the friends of the law, in making the act more efficient and workable.

These matters and conditions of pending legislation with respect to the paint and oil trades, oleomargarine, public health and the marine hospital service must be reflected upon by all who would have a fairly intimate knowledge of the part which the United States Government in its different relations has played in touching at different points the many industries of the country.

The Tariff and the Administration Policies.

The legislative program covering Federal relations with affairs of interest to the various trades has suffered a considerable handicap during the past year by reason of the fact that changes in the political complexion of Congress produced a majority in the House of Representatives of one political faith and a majority in the upper branch of the opposite faith. The latter House of Congress, the Senate, was somewhat demoralized from a political standpoint by reason of the existence of a faction known as "insurgents," who did not at all times act in accord with their party associates. It is easy to be seen that the results with respect to legislation could not be otherwise than unsatisfactory from every standpoint.

Before considering what was contemplated to be done and what is now under consideration with respect to tariffs and their influence upon the domestic and foreign trade of the United States, it is well to pause for a moment and consider what President Taft's administration now has in mind with respect to tariff policies affecting the trade relations of this country with foreign countries.

As a result of the creation of the Tariff Board, under the provisions of the Payne tariff law of 1909, and the consideration which this board gave on behalf of the administration to the international trade relations of the United States, many facts were disclosed regarding alleged discriminations against the trade of the United States by certain foreign governments. The tariff law of 1909 contains a provision for maximum and minimum rates of duty. It is provided under this section of the law that foreign countries which treat fairly the trade of the United States shall be entitled to the minimum duties of our tariff: the maximum duties are to be imposed against countries which deal unfairly with American export business. The first results of the Tariff Board's investigation were that all foreign countries having any trade with the United States were accorded the benefits of entry for their products into the markets of the United States under the minimum schedule of duties of our tariff.

Since the passage of the tariff law of 1909 a variety of controversies have arisen between the United States and some foreign countries regarding the treatment which American interests have received within the confines of such foreign countries. These difficulties have arisen regarding the foreign treatment of Americans, in such cases as the potash controversy between Germany and the United States, issues raised regarding oil exports and sales in foreign countries, and a long line of issues of like character affecting many branches of American trade, commerce and investments in foreign countries.

About the time of the opening of the session of Congress in December President Taft and Secretary Knox, of the State Department, addressed communications to both branches of Congress, setting forth that while some of the foreign discriminations against American trade and interests abroad were not of a character which would warrant the United States insisting upon imposing maximum rates of duty on all the trade of such offending foreign country, it would be desirable that Congress should make such changes in the existing tariff law as would enable the executive branch of the government in its discretion, after full consideration of the case, to punish such offending foreign country by transferring certain products from the free list to the dutiable list, or to increase duties against such offending foreign country from 5 to 25 per cent., as the case might be, according to what would be believed by the administration to be the most effective way of dealing with such foreign country to bring it to a realizing sense of the duty owed to American interests, whether in trade or in the affairs of Americans within the borders of such foreign country.

This idea of punitive treatment of foreign countries is the outgrowth of the operations of the existing tariff law and investigations made by the Tariff Board, the Trade Relations Bureau of the State Department and advices received from special agents, diplomatic and consular officers in foreign fields. The negotiations of the Taft administration with Canada, leading to the trade agreements sought to be made with that country, furnished considerable information to the administration heads regarding the limitations and scope of our tariff policy in dealing with our international trade and our general trade relations with foreign countries. It is too early to say what the attitude of Congress will be toward these propositions emanating from the administration, but the first intimations given from the Democratic majority in the House were that the idea would be resented as being calculated to confer too great power upon the executive departments of the government and the President himself, and was calculated to place in the hands of these executive officers power which might be utilized to demoralize the revenues and trade of the country in all cases where acute controversies arose between this country and any foreign country over alleged discriminations against American trade.

The most notable event in the administration affairs during the year was the unsuccessful attempt of President Taft's administration to project a trade agreement for reciprocal exchanges in many lines of commodities between the United States and Canada. This policy constituted the basis for the action of President Taft in calling Congress in special session in the early summer of 1911. It was soon discovered that this policy of the President, which was formulated by the State Department under the direction of the Executive, opened up a veritable pandora box of factional and partisan politics. Most of the representatives of the Democratic party in control of the House hastened with alacrity to adopt the terms of the trade agreement with Canada. A large majority of the Republican members of the House rejected the proposition advanced by their administration leaders and refused to support the trade agreement. In the Senate a greater division of sentiment was encountered. The trade agreement passed the House by a considerable majority, but in the Senate there were conflicting views represented in both parties, and factional efforts were put forth by the leaders of both parties to bring about radical changes in the trade agreement plan. These factional differences operated to embarrass the Democratic majority in the House in its efforts to formulate a tariff policy, in order to show to the country what the purposes of the Democratic party are with respect to the tariff changes.

The Reciprocity Policy.

The proposed trade agreement with Canada was intended to affect a large number of raw materials, chiefly of agricultural production and some consideration was given in the provisions of the agreement for the promotion of the oil cake and oil seed products generally between the United States and Canada.

It was disclosed during the consideration of the bill in the House that the Democratic majority did not believe that the measure went far enough. It was proposed by that party, not in the trade agreement itself, but in subsequent tariff measures which were brought forward to open up what amounted practically to freedom of trade in various lines of meat products and provisions, thus intending to carry out the policy of avowed purpose "to reduce the cost of living."

It was at this point that the differences between the supporters of more liberal policies in tariff making were brought in sharp conflict. Many of the so-called "insurgent" Republican members of the Senate sympathized with the low tariff ideas of the Democratic majority in the House, but these insurgent Senators, coming from the agricultural States of the West and Northwest, resented very bitterly the efforts of the Taft administration to encourage a free exchange of raw staples of the farm between Canada and the United States. These differences between the allied forces of low tariff policies in both Houses brought about some very interesting complications and resulted in demoralizing to a great extent the tariff plans of the legislative leaders in Congress. The trade agreement with Canada was passed in the special session, but all efforts of the legislative branch to bring about tariff changes were defeated by vetoes which the measures received at the hands of the President.

It was the policy of the administration to put the Canadian trade agreement through Congress first and the Democratic majority in the House agreed with that policy, but the latter element in the legislative branch determined that the administration should not have the satisfaction of carrying through the trade agreement with Canada without at the same time disclosing the attitude of the administration toward general changes in the tariff law of the country. To this end the Democrats formulated tariff bills intending to make radical changes in the wool and woolen goods schedule, cotton goods and proposing to transfer to the free list a large number of raw materials and finished manufacturing products. The low tariff Republicans in the Senate resented some of the features of these Democratic tariff bills, notably those which sought to reduce duties upon food products, such as provisions, cereals, etc. The ultimate result of these differences of opinion was the construction of tariff bills unsatisfactory to all parties, which could not but mean that the President would find ease and gratification in exercising his veto power upon them.

When these bills reached the Senate they encountered opposition from both parties, and it was early disclosed that Senators from the cotton producing and maunfacturing States of the South would not willingly submit to reductions in duties on finished manufactures unless corresponding reductions were made in other schedules of the tariff, notably the schedule dealing with chemicals. In pursuance of this idea, a so-called revision of the chemical schedule was hastily prepared and thrust into the Senate with little or no consideration of its various features or their possible effect. The most grotesque and ill considered of all the tariff legislation proposed in the special session, which really passed Congress and went to the President for his signature, was that relating to the chemical schedule. President Taft in his veto of the measure analyzed the schedule to some extent, pointed out its incongruities, and how in efforts to reduce duties on chemicals, and practically every item in the chemical schedule, often would have really resulted in tremendous increases in duties rather than the reductions desired by the framers of the bill.

This review of the efforts of tariff legislation during the year serves to illustrate how impossible it seems to be for a divided Congress, with one party in control in one branch of the legislative administration, and another party in the other branch, to accomplish anything in the way of satifactory results. The opening of Congress at the regular session in December showed substantially the same lines of division between the parties as existed during the special session. While there has been considerable talk of prospective legislation, including renewal of the efforts to revise the wool and woolen, cotton goods, chemical, and steel and iron schedules, the first suggestions with respect to this work that have emanated either from the administration or from the leaders in both houses indicate a probable failure of all efforts along the lines of changes in these schedules rather than success with respect to any one.

Pure Food and Drug Law Amendments.

In the course of the past year there have been some noteworthy decisions by the courts affecting the general provisions of the Pure Food and Drugs Act. Early in the winter of 1910-11, the high courts of the District of Columbia, and the Supreme Court of the United States, in passing upon cases that were brought in those courts, either originally or upon appeal, struck what the friends of the law believe to be serious blows at some of the vital features of the Pure Food and Drugs Act. These decisions covered, first, the question whether the three Secretaries of the Treasury, Commerce, and Agricultural departments, in making regulations under the provisions of the Pure Food law for the enforcement of the act exceeded their powers. This issue was

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raised in what is known as the antikamnia case. Second, the question whether there are provisions in the Pure Food and Drugs law which prohibit the use of expressions on labels intended to represent curative or therapeutic qualities in drugs and medicines placed on the market. This was the Johnson cancer cure case. Third, there was a far reaching decision in the Supreme Court of the United States relating to the question of the power of manufacturers and dealers operating in interstate commerce to maintain prices by contractual agreements entered into during the transactions from the manufacturer through the wholesaler or jobber to the ultimate consumer. This was the Dr. Miles Remedy case.

Shortly after these various decisions were given by the courts there was manifested a disposition on the part of law officers of the government and the officials of the various departments, who have to do with the enforcement of the Pure Food and Drugs law, to bring about such amendments in the law as will cure the defects alleged to exist therein, which defects were pointed out by the court decisions.

The fact that the greater part of the year was devoted by Congress to matters specially relating to the tariff, and so little consideration was given to any other subject, no progress was made in the consideration of bills that were introduced during the special session of Congress intended to amend the Pure Food and Drugs law along some of the lines touched by the decisions of the courts.

Beginning with the regular session of Congress in December the various bills intended to cover some of these alleged defects in the law were reintroduced or brought to the attention of the appropriate committees of Congress for consideration.

No steps have yet been taken by the government, or in any legislative way, to cure the alleged defect in the law as pointed out by the higher courts of the District of Columbia in the antikamnia case, regarding the alleged acts in excess of authority by the three executive heads of the departments under whose authority the regulations were made. The fact is that the antikamnia case went through the District Supreme Court and the Court of Appeals of the District of Columbia, and intimations were given by the government which lost at all points in the litigation, that there would be an appeal to the Supreme Court of the United States before efforts were made to induce Congress to grant the authority which the court denies exists in the law, yet nothing has been done with respect to this decision. The present intimations are that such legislation will be asked and that there will be no further appeal of the antikamnia case, it evidently being the opinion of the law officers of the government that the Supreme Court would be liable to approve of the opinions given in the lower courts with respect to this subject. In other words, it probably will be the next move of the government to attempt to secure in Congress legislation along the lines of the regulations which were made under the authority of the three heads of the departments. The effect of this legislation, if it is proposed, will be to carry out the wishes of the officials charged with the enforcement of the Pure Food and Drugs law, that names of derivatives of dangerous drugs shall be placed on the labels of products, together with the name of the original drug from which the derivative is taken. The contention of the government in the antikamnia case was that the regulations requiring that this be done was justified by the provisions of the law, but the courts sustained the contrary view of the matter as it was presented by the attorneys for the Antikamnia Company.

Some of the Issues Involved.

In a decision by the Supreme Court of the United States in a case brought to test the question whether labels may properly carry expressions intended to convey to the public curative properties of drugs the court held that there was no inhibition in the law to the use of such expressions. There was a vigorous dissent to this decision, and broad intimations were given that the law clearly intended to cover all cases of false and fraudulent representations, and that where representations as to curative qualities unquestionably were false and fraudulent the law should reach such alleged violations of its provisions.

Another case which reached the Supreme Court of the United States related to the question of the power of manufacturers of patent medicines and, of course, all other products would be subject to the same rule of law, to sell to wholesalers and retailers at stipulated prices under a contract, that these prices shall not be departed from in sales made by wholesalers or retailers in finally disposing of the product. The Supreme Court held that where there is a complete sale, control of the product passes from the vendor to the vendee, and that no agreement can be made effective to prevent the vendee selling at lower prices if he elects to do so. This decision, far reaching in its effect upon all foods, drugs, etc., has, it is alleged, brought about a variety of arrangements among manufacturers of foods, drugs, and other products, to control the prices of their products under what probably amounts to contracts of agency rather than outright sales. Whether there is to be any effort to legalize such latter contractual arrangements has not yet been disclosed.

The case of the Supreme Court of the United States involving the question whether labels may bear representations as to curative qualities of drugs and medicines, brought a vigorous opinion from a majority of the court that there exists no provisions of the law forbidding such representations on the labels. There was a strong dissenting opinion in which several members of the court joined, and in which the statement was made that the provisions of the Pure Food and Drugs law relating to the false and fraudulent representations clearly should be held to apply to all cases wherein the proof was convincing that the representations made were false and fraudulent.

Beginning with the session of Congress in December bills were presented for the consideration of the Interstate and Foreign Commerce Committee of the House to amend the Pure Food and Drugs law along the lines of the decisions of the courts. One of these bills, introduced by Representative Sherley, of Kentucky, would amend section 8 of the law, covering the subject of misbranding, and adding a third subdivision to the effect that "if its packages or labels shall bear any statement, design, or device regarding the curative and therapeutic effects of such article which is false or fraudulent." Another bill, which has been reintroduced and modified at different times, was presented by Representative Richardson, of Alabama. This measure has a wider scope and is intended to amend Sections 6, 7 and 8 of the Food and Drugs act. In respect, first, to the Section 6, provisions relating to the use of ethyl alcohol, or wood alcohol, or poisonous or deleterious ingredients in hair dyes and toilet preparations, and poisonous or deleterious ingredients in packages of tobacco, etc. As to section 7, the new and all the old provisions of the law covered in the bills with respect to adulteration in cases where the product violates the provisions of Section 6 of the act are retained. The Richardson bill also, in Section 8, covering the subject of misbranding, carries the same idea with respect to false or misleading representations with regard to remedical properties of drugs and compounds as are set forth in the Sherley bill, but in different form.

It is in this form, substantially, that the various provisions of the pure food law, as they have been interpreted by the courts, were brought to the public attention during the past year with the plans outlined for correcting real or fancied defects in the law.

The Potash Controversy.

It can be no matter of wonder to the trade in general that so much interest was aroused throughout the United States in the controversy which occupied the greater part of the year between the authorities of the United States and those of Germany, in which participated American purchasers of potash from German mines. When it is recalled that vast agricultural interests throughout the United States, and especially in the South and Southwest, depend in large part for their successful operation upon a liberal supply of high-grade fertilizer for the restoration and maintenance of soil conditions, it becomes apparent to even the most casual thinkers on the subject that the sources of supply of fertilizers must be of great moment to the agricultural and manufacturing industries of the country.

To begin with, the controversy between the United States and Germany grew out of contracts which were made by American potash buyers with owners and operators of potash mine deposits in Germany. It was just at this point that the policy which Germany has adopted in recent years of concentrating all efforts in the empire towards the maintenance and strengthening of home industry and giving no concern to the affairs of the outside world, except as those affairs may be touched through exporters of German products, comes to be a matter of concern to everybody who has any business relations with the commercial institutions in Germany. It soon was disclosed no doubt to the commercial organizations of Germany, that a tremendous power would come to the empire from direct control of the great potash deposits of that country. The potash mines are almost entirely controlled by an extensive German syndicate. The executive and legislative authorities of Germany concluded that by the passage of effective laws the control of these deposits, which might be accomplished through a system of taxation, the domestic marketing and exporting of potash would pass under direct control of the government of the empire itself.

The passage of laws directly touching production, transportation, and selling of commodities invariably create serious disturbance in the business world. That fact has been recognized in the United States, particularly within recent years, when so much Federal and State legislation has been adopted having direct bearing on these intimate business relations of the people. Such was the fact in connection with the passage of the German law for taking and controlling the output of potash. Naturally, at once this affected the relations of American potash buyers who had contracts with the German mines and seriously affected the prices carried in the contracts already made by the American companies with the owners of the potash deposits in Germany.

For governmental authority there has been given, during the course of this potash controversy a detailed account of just what the situation was at the time the American contracts were made, what was expected of the German syndicate, and the agreements that had been in existence up to the time of the break produced by the controversy. It appears that the German potash syndicate constitute a combination of 76 companies, which practically control the potash industry of the empire. The chief competing mines were in Einigkeit and Sollstedt, and the Brunswick and Anschersleben of the Magdeburg district. In part, at least, one of these producing sections—Einigkeit—was controlled by the contracts with American potash buyers. As a result of contractual arrangements made between these producers and the American buyers, various details were set forth intended to control the output and prices of potash during given periods. In many instances the contracts made by the Americans with the German potash producers covered periods of three to five years. Elaborate arrangements were covered in the contractual agreements between the parties of the syndicate and with the buyers, either in Germany or in the United States, relating to the shares which the different buyers should have of the aggregate output of the various mines.

Shortly after these various business arrangements were made along came the interference of the German Government through laws passed in the Reichstag. The syndicate control in Germany covered several of the most important potash mines and so far as the control of the syndicate was effective all competition in the making of potash prices ceased. The operation of the German law placed in the hands of the syndicate complete control of the potash output of the empire.

The importance of this to the potash consuming world can only be understood from the statement of the fact that practically all of the potash deposits in the world at this time appeared to be centered, at least so far as commercial importance of such deposits are concerned, in Germany. The results of the relation between the German syndicate and the German Government was to bring about, what is understood in this country to to be the case with respect to many industrial concerns, legally constituted trust organizations having the backing of the government of the empire itself.

The effect of this German legalizing of trust control of the potash output of the empire was greatly to increase prices and practically to nullify contractual agreements made between American buyers and the German producers. This, of course, immediately brought protests from American sources against the action of Germany in thus ignoring contractual arrangements made between the people of the empire and American citizens, and these protests took the form of diplomatic negotiations seeking to bring about concessions on the part of the German Government, and everybody in that country connected with the potash deal, which should in some respect at least mollify the serious effects which were recognized as certain to flow from the new conditions. Under the arrangements made by the syndicate, in pursuance of the policy contemplated in the law of the empire, the supplies and output of potash were made as nearly as possible co-equal with the demand. This policy not only affected the agricultural interests of Germany, but operated to effect in a serious way the exporters of potash to the United States, thus reacting severely upon the entire fertilizer market of this country.

Sweeping Effect of the Policy.

It is to be remembered in this connection that the policy of solidarity pursued by Germany is intended to bring about the closest possible relation between the agricultural, manufacturing and general commercial industries of the empire through the control by the government of inland transportation facilities and through subsidized steamship lines and railways controlled by the government, operating through commercial organizations that have more or less governmental sanction, all if not under entire control through representation by the government in these commercial organizations, or what is the same thing, only better understood, representation by the commercial and industrial organizations in the government itself. Explanation has been given in the reports regarding the organization of legalized trust syndicates controlling the potash in Germany which serves to show what a wide distinction there is between those industrial combinations or organizations in Germany and what is recognized as industrial or other business combinations in the United States. It has been explained that most of the syndicates of Germany connected with the potash matter have no capital stock or shares which are dealt in on the exchanges and that such a syndicate as that in Germany constitutes a combination for a limited period. The potash syndicate in Germany is made up of companies of two kinds with capital divided into shares somewhat akin to the joint stock shares known in the United States, with limited liability. The syndicate is really a dual organization, one factor being that syndicate proper and the other a trust organization which really amounts to the controlling part of the syndicate. The particular point which differentiates the syndicate and trust organization, such as is represented by the potash scheme of Germany, from all trust organizations, or combinations for any purpose in the United States, is the recognition by law in Germany of this syndicate and trust organization, and the protection which the law gives to it, as a part of the German policy of concentration and exploitation under control of the empire itself. It is explained that the moving principle, whether of governmental or industrial character in Germany, behind this plan of legalizing trusts, is not monopoly, but the controlling of competition. It is more than that, however, because it not only seeks to control competition but to bring about such operations in all the industrial fields of the empire as shall make for that concentration, and prime consideration at all times of the best interest of the German Empire, as against all the world.

It is a matter of great disappointment to Americans who had contractual relations to purchase potash in Germany that the government in Washington seemed utterly powerless to meet the conditions which were produced by the action of the German Government in supporting the potash syndicate. The reason for this failure is stated briefly to be that, just as the United States has in a few instances, while Germany does in many, seek by legal means to aid in the development of domestic industry and encourage exporting business, Germany with remarkable singleness of purpose seeks by every possible means to promote the German welfare regardless of the effect her policy may have upon the outside world. Germany proceeds with a policy with respect to taxation and control of her potash mines as a distinctive governmental matter in which the outside world has no right to be concerned, and any obligations or disastrous effects flowing from such governmental action must be borne out only by the German citizens, but certainly by the outside world with so much of satisfaction as can be felt by anybody who finds that law and its operations work disaster to his business affairs. In other words, Germany says to the United States, "Our policy in dealing with potash is a matter of domestic concern only. If any people of the United States have entered into contracts in this country they must have done so with a full knowledge of possible changes in German laws or policies which would operate to the betterment or the disadvantage of business deals entered into as a part of such contractural arrangements. Germany declines to permit the affairs of her own people to interfere with policies adopted for the general well being of the empire, and much less is she inclined to permit the interests of outsiders to limit or prevent the carrying out of such German policies as are intended for the benefit of all the people of the empire."

When it was disclosed that all the relief which could come from the negotiations must be through representations made by this government with the government of Germany, and it became known that millions of dollars annually have been expended by the people of the United States in buying and importing German potash, there came to be a full realization in this country of the possibilities of the German policy in increasing the prices of potash to American consumers. Straightway there followed vigorous efforts by the American contractors to so shape their affairs in connection with the potash syndicate as to diminish rather than increase the loss resulting from the new German law and policy. Measures were set on foot which contemplated, if made effectual, a saving of several millions of dollars in the contract prices for American purchasers of potash.

In connection with the negotiations there promptly began to be the most urgent and persistent efforts through the executive departments of the government in Washington to search for potash deposits in every section of the republic. The activities in this direction have been one of the striking features of government work in all its branches during the past year. A variety of interesting and instructive reports have been made by the Department of Agriculture, the Geological Survey, and scientific bureaus in Washington regarding the supplies of fertilizer ingredients in all parts of the United States, and so much study is being given this subject that if it shall be possible to find relief from dependence upon the potash deposits of Germany, the agricultural and indus-

CO-OPERATION—NOT COMPETITION

¶ As a rule margins in the jobbing trade are narrow so that the wholesale druggist must look for his profits in volume of sales. In view of this condition it is but fair and logical that jobbers extend their support to the manufacturers who recognize the economic necessity of the wholesaler and confine the distribution of their products to jobbing channels.

¶ For about twenty years the tendency of competing pharmaceutical manufacturers has been to eliminate the jobber. To a large extent they are now supplying retail dealers direct, at special discounts, transferring the pharmaceutical accounts of the trade from your books to their own. Thus, the growth of other manufacturers' lines means less and less business for you. During the same period our efforts have been to turn all business through the jobber. The Lilly Policy is constantly co-operative and never competitive with the jobber.

YOUR BUSINESS GROWS WITH OURS

¶ We believe that the wholesaler who extends credit accommodations to the retailer on his general stock and serves him in many other ways on a slender profit is justly entitled to participate in the distribution of pharmaceuticals and that he can do it at a saving to the retailer under the Lilly Policy.

¶ The Lilly Policy is to make Pharmaceuticals of the finest materials, according to scientific standards, and to distribute them in a manner which affords the *jobber*, the *retailer* and the *physician* each the recognition and protection to which he is justly entitled.

¶ Retail customers large and small alike are supplied with Lilly Pharmaceuticals through the *jobber* so the greater the use of Lilly products *the more you will sell.*

¶ Your generous recognition of the Lilly Line as the JOBBER'S LINE is highly appreciated and we look confidently for a continuance of your co-operation as it is demonstrated that YOUR BUSINESS GROWS WITH OURS.

ELI LILLY & COMPANY

INDIANAPOLIS NEW YORK CHICAGO ST. LOUIS KANSAS CITY NEW ORLEANS

trial interests of the United States may depend upon it that this relief will be speedily secured.

The Agricultural Department Imbroglio.

A glance backward at the details of the controversy involving most of the high officials of the Department of Agriculture has a tendency to disclose what many people believe is considerable prejudice, ill feeling and not very cordial relations existing between men in high official positions who have had to do with the details of the enforcement of the Pure Food and Drugs law. It was made perfectly clear by the evidence brought out in the case, and the temporary adjustment of the matter made by President Taft in a letter to Secretary Wilson, that many things were going on in the Department of Agriculture and its Bureau of Chemistry which were not very creditable to some of the officials participating therein.

It has long been known that the relations between Secretary Wilson, head of the department, and Dr. Harvey W. Wiley, chief of the Bureau of Chemistry, were not altogether cordial and harmonious. It has been said many times in recent years that a man of Dr. Wiley's temperament, his indefatigable industry and vigorous assertiveness, occupying a minor place, could not but find himself from time to time a little out of harmony with his superior officials. Attention has been called to the fact that President Roosevelt and Dr. Wiley found themselves somewhat in disagreement over the manner of treating pure food and drug matters that were of serious import, affecting not only domestic but international relations of the country. However, the conditions surrounding the relations between Dr. Wiley and the head of the department, the Chief Executive, whether Mr. Roosevelt or Mr. Taft, were not supposed by the public at large to be of any such moment as to amount to a great public issue. It was only when a controversy arose in the department that evidences of strained relations were brought to light, and conditions were shown to exist which could not but militate against efficient service in the department in all its relations, and especially with respect to the enforcement of the Pure Food and Drugs law. As will be remembered, when the pure Food and Drugs Act was placed on the statute books, under certain of its provisions, the Secretaries of the Treasury, Commerce and Labor and agricultural departments were made the executive heads or final court of reference for pure food and drug decisions, and an Inspection Board was provided for in the same act. That Pure Food Board was organized in the Department of Agriculture, in pursuance of the statute, by the appointment of Dr. Harvey W. Wiley, chief of the Bureau of Chemistry, as chairman of the board; George P. McCabe, solicitor of the department, and Dr. F. L. Dunlap, assistant chemist in the Bureau of Chemistry, as the board membership.

During the progress of departmental affairs in their relation to the enforcement of the Pure Food and Drug law a number of matters arose which showed differences of opinion not only in the Pure Food Board, but in the relation of that board to the head of the department, and, also, possibly toward the heads of other departments having to do with the law. These issues embraced such questions as benzoate of soda, whisky, saccharin, etc.

There were intimations from time to time that Secretary Wilson and his immediate associates in the department were not always well pleased with the vigorous assertiveness of Dr. Wiley as head of the Pure Food Board. There were no evidences of any open break, however, but it came to be understood in some circles around Washington that there was not a warm, cordial and harmonious agreement between Dr. Wiley, as head of the Bureau of Chemistry, a branch of the Agricultural Department itself, and the head of that department. It was as a result of the inner workings of the Pure Food Board and the operations of the Bureau of Chemistry, and the expert officers of that bureau connected with the details of the enforcing of the pure food law that some of the facts as to the differences between Dr. Wiley and his superior officers were brought to light.

It is only fair to say that whatever may be the ultimate conclusion with respect to this controversy and whatever action may be taken either by Congress, President Taft or by the department itself, practically all that was brought out in regard to the details of the controversy itself disclosed evidence of misunderstanding, want of precise information as to all the details about the workings of the Bureau of Chemistry in the department, and, perhaps, some evidence of lack of sympathy, if not real prejudice, working among members of the Pure Food Board themselves.

This controversy was precipitated early in the spring of 1911 by a disclosure in the Department of Agriculture itself, through a report made to the Committee on Personnel of the department by Dr. Dunlap, in his capacity as secretary of the Pure Food Board, but temporarily at the time acting as chairman of the board and head of the Bureau of Chemistry in the absence of Dr. Wiley. This disclosure by Dr. Dunlap amounted to a criticism, or suggested criticism, of the conditions surrounding the employment of Dr. H. H. Rusby of New York, as an expert advisor and assistant in the operations of the Pure Food Board. Intimations were given in this statement that the employment and pay of Dr. Rusby, presumably under the direction of Dr. Wiley as the head of the Bureau of Chemistry and chairman of the Pure Food Board, had been irregular, to say the least.

Details of the Department Disclosures.

It is to be remembered in a review of this controversy, that the Bureau of Chemistry furnishes the greater part of the expert assistance and technical aid of the government in enforcing the provisions of the pure food law. Drs. Wiley and Dunlap and Dr. L. F. Kebler and Dr. Bigelow are chemists in the bureau and were conspicuous in their work on all pure food cases. Dr. Bigelow occupies the position as head of the Personnel Committee in the Bureau of Chemistry and as such had more or less to do with the employment of outside experts. Dr. Rusby was in this class of outside experts who gave more or less time during each year to technical investigations of pure food questions and as an expert testified in pure food and drug cases in the courts. The Committee on Personnel in the department itself consisted of Assistant Secretary Hays of the department next in power and influence to the Secretary, Solicitor George P. McCabe and the chief clerk of the department, Mr. Clark. It was to this committee that the suggestion was made by Dr. Dunlap of the irregularity of Dr. Rusby's employment and compensation. The Personnel Committee made some investigation of the subject, which resulted in a letter being sent to the head of the department, Secretary Wilson, suggesting that Drs. Wiley, Bigelow and Kebler be permitted to resign, and that Dr. Rusby's connection with the department should cease.

In the investigation of this subject it followed, notably in the testimony taken by a committee of Congress, that some effort was made by the Committee on Personnel of the department to get at the facts in the case involving Dr. Rusby's employment, by taking the testimony of Drs. Wiley, Bigelow, Kebler and Rusby, and the correspondence which had passed between these officials was laid before the Committee on Personnel. The fact which was most strikingly disclosed, however, was the failure of the committee to ascertain in a particular case whether a certain letter which was written by Dr. Rusby to Dr. Wiley, but had not been sent to Dr. Wiley, really was known in any way to Dr. Wiley. It is a fair inference, as appears later to have been admitted by the members of the Committee on Personnel, that as was later disclosed, Dr. Wiley had no knowledge of this letter from Dr. Rusby, a copy of which was inadvertently sent to the Personnel Committee by Dr. Rusby in a mass of papers without any explanation accompanying the letter that it had not in fact been sent to Dr. Wiley, an entirely different view of the subject might have been taken by the Personnel committee as to the relations of Dr. Wiley to the matter.

The first step taken in the controversy after the report of the Personnel Committee to Secretary Wilson was the submission by the Secretary of the matter to the President, who turned it over to Attorney-General Wickersham, head of the Department of Justice, for a legal opinion regarding the whole controversy. The legal opinion given by Attorney-General Wickersham supported the policy adopted by the Personnel Committee and really indorsed the drastic measures proposed by that committee nvolving the separation from the service of Dr. Wiley and other other parties to the affair.

It was when this was disclosed, together with some of the correspondence which had passed, the decision of the Personnel Committee and the opinion of Attorney-General Wickersham, that considerable public notoriety attached to the whole affair and cognizance was taken of it by one of the committees of Congress. That committee called before it all the parties to the controversy. After the hearings were made public President Taft took up the matter and in a letter completely exonerated Dr. Wiley and his co-officials, and thus left little for the committee of Congress to do except to pick up the threads of the controversy and propose such legislative measures as would improve the conditions existing in the Department of Agriculture, especially with respect to the Bureau of Chemistry and the operations of the pure food law.

The most significant fact connected with the letter written by President Taft to Secretary Wilson, was the intimation it gave that steps should be taken at a later time to improve the efficiency of the department. The natural inference to be drawn from this suggestion was that President Taft had become convinced, as a result of the controversy, that conditions in the department were not of that harmonious character as to insure the best possible results in departmental operations.

Following this temporary, at least, settlement of the controversy by the complete vindication of Dr. Wiley, there came out from time to time in vague ways suggestions purporting to emanate from the department itself, that there should be some substantial changes in the operation of the department connected with the enforcement of the provisions of the pure food law. Solicitor McCabe ceased to be a member of the Pure Food Board and in his place Dr. R. E. Doolittle, of New York, was called to the Bureau of Chemistry and made a member of the Pure Food Board. Dr. Dunlap was absent from the department during the closing part of the controversy on an extended leave, but since his return to the department, in the closing days of the year, he has acted as a member of the board and as its secretary. It is in this condition that the affairs of the Department of Agriculture, the Bureau of Chemistry and its office force, and the relations of these departments to the pure food law, were left as the year closed.

Habit-Forming Drugs.

At repeated intervals during the past two years attention has been given by the committees of Congress, notably the Ways and Means Committee, to measures that have been introduced relating to the control in interstate commerce of shipments of habit-forming drugs. Hearings were conducted a year ago by the Ways and Means Committee on the bill introduced by Representative Foster, of Vermont, which measure was intended to control the shipments of opium, cocaine and other derivatives and preparations made therefrom in interstate commerce. A number of government officials, notably those who have had to do with the International Commission for the control of the manufacture and sale of opium in international trade, participated in a discussion before the committee, but no resolution was reached as to the course that should be pursued.

In the closing days of the last session of Congress, early in 1911, the House was so much occupied with other measures that no attention was given to the bill relating to habit-forming drugs. Naturally, during the special session of Congress when the House was giving its entire attention to tariff matters no progress was made with respect to this legislation.

Evidentally for the reason that the officials of the department, notably those in the Bureau of Chemistry and connected with the operations of the pure food law, have reached a conclusion that nothing could be accomplished by direct legislation in Congress relating to habit-forming drugs, an effort has been made by the officials to cover this subject in a pure food decision. In the early part of December, 1911, a tentative food inspection decision regulating the importation and sale of opium, morphine, cocaine, cocoa, their derivatives and preparations, was prepared and sent out to the trade for consideration and suggestions as to merits of the proposition.

It is the belief of the department officials that if the control of habit-forming drugs in interstate commerce can be covered under the present pure food law there will not be so much necessity for further legislation by Congress along the line of the Foster bill and other bills that have been considered from time to time by the committees of Congress.

The essence of the tentative food inspection decision takes into account, in its discussion of the subject of the manufacture and sale, as well as the importation and transportation in interstate commerce of habit-forming drugs, that the indiscriminate and promiscuous use of opium, morphine, cocaine, their derivatives and preparations, is recognized as a great menace to the public health. It is further declared by the department officials that the administering of these drugs by skilful hands contribute much to the relief of pain and suffering.

With the foregoing preliminary statement, which sets forth the object and purpose of the proposed decision and takes note of the alleged growing promiscuous use of these dangerous drugs, it is asserted that section 11 of the existing food and drugs act regulates the importation of any drug which is adulterated or misbranded, "or is otherwise dangerous to the health of the people, or is of a kind forbidden entry into or forbidden to be sold or restricted in sale in the country in which made, or from which it is exported."

It is upon the basis of the foregoing provision of the existing pure food and drug law that the effort is being made by the department to regulate the importation and sale in interstate commerce of the United States, and wherever the power of the Federal Government extends to trade in commerce in these dangerous drugs and foods, and the idea herein contained is made the basis of the proposed decision relating to habit-forming drugs. In fact, at the time the tentative decision was given out relating to opium, cocaine and their derivatives, a tentative decision was sent to the trade covering the importation and sale of absinthe. The point was made as to the latter product that France and other countries in which absinthe is manufactured had gone to considerable lengths in efforts to control this product, as dangerous to the health and lives of the people.

The department officials in further discussing the situation as warranting the proposed action under the existing Pure Food and Drugs law, say that most of the States have laws regulating the sale and use of opium, cocaine, their derivatives and preparations, but it is impossible without some control of the interstate trade in these products to reach the sale and use of these dangerous habit-forming drugs outside of the borders of States wherein laws controlling the manufacture and sale of these drugs have been passed. The object of the proposition advanced under the provisions of the Pure Food and Drugs law to extend the system in vogue in the States that have aimed laws against habit-forming drugs to the interstate commerce of the country. It is declared by the officials to be for the purpose of co-operating with the States in order that these drugs may be available for legitimate purposes and that their illegitimate use be curtailed, that the proposed decision govern the traffic in these drugs has been suggested.

The force and effect of the proposed move by the Federal government relating to these habit-forming drugs is best shown in a summary of what the department seeks to make effective as a food inspection decision. In this proposed decision "it is directed that for every importation of cocaine, whether purified or otherwise, its salts or derivatives or preparations thereof, or cocoa, or any preparations or derivative thereof, there shall be filed with the chief or acting chief of the appropriate laboratory of the Bureau of Chemistry, Department of Agriculture, at the time of entry, a declaration of the owner or consignee of the merchandise." This declaration is intended to show the facts with respect to the importation of the drug, the quantity imported and that the drug is brought in for "medicinal purposes or for manufacturing medicinal agents, and such cocaine or cocoa, or their derivatives or preparations, are not intended to be used in such manner as to render them in any way 'dangerous to the health of the people of the United States.'"

Other Details of the Plan.

Similar provisions are made with respect to the importations of opium, and are carried out in line with the act of Congress of February 9, 1909, "to prohibit the importation and use of opium for other than medicinal purposes." Regulations made in pursuance of the law of 1909 are intended to be adopted as part of the general decision of the government relating to the importation and sale in interstate commerce of opium, its derivatives and preparations.

Further, for the purpose of covering domestic transactions relating to opium, cocaine, their derivatives and preparations, a declaration is required by the proposed decision intended to cover the vending of these habit-forming drugs. The declaration is made to cover the kind and character of the seller and buyer of these habit-forming drugs, and that the object of the purchase is "for treating disease, or in the preparation of medicines or the manufacture of alkaloids or salts of alkaloids, and such preparations or alkoloids, of salts of alkaloids, if sold or given away, are to be sold or disposed of or given away by said firm for medicinal purposes only, and are not intended for other but medicinal purposes."

There are provisions in this proposed decision for waiving the declaration in cases where purchase is made upon the original written order or prescription of a legally authorized practitioner of medicine, dentistry, or veterinary surgeon, but with specified requirements as to the order or prescription with respect to dates, signatures, etc. There is a provision that "should any evidence appear that such prescriber or practitioner is promoting or fostering in any way a drug habit, the privilege of filling his prescription shall be withdrawn." There are provisions for maintaining records and declarations, prescriptions, orders, etc., a complete definition of the terms "for medicinal purposes only," and "for treating disease," and there is also the following in the nature of the proviso:—The simple use of any of these products for inducing sleep in infants or similar purposes is not properly called "for medicinal purposes" or "for treating disease." The manifest purpose of the department in this regard is to make the decision against habit-forming drugs cover the case of so-called "baby killers," against which the department has inveighed bitterly from time to time during the past few years.

Provision is also made in the decision for complete record to be kept of the entry of these habit-forming drugs in their original form into the United States, and for records of the importation and uses to which these drugs are put by all manufacturers,

NATIONAL ANILINE & CHEMICAL CO.

100 William St., New York

DRUGS - DYESTUFFS - CHEMICALS

HEADQUARTERS FOR

Crude Drugs
Essential Oils
Coal Tar Products
Gum Tragacanth
Gum Arabic
Vanilla Beans
Powdered Castile Soap
Olive Oil
Carbolic Acid
Cresol
Precipitated Chalk
Olive Oil Soap
Caffeine
Phosphoric Acid
Opium
Magnesia
Camphor
Certified Colors

BRANCH OFFICES AND WAREHOUSES

Boston, Providence, Hartford, Philadelphia, Cincinnati, Chicago, Milwaukee, Kansas City, Minneapolis

Factory: Schoellkopf, Hartford & Hanna Company, Buffalo

jobbers, wholesalers, retailers, compounders, dispensers, etc., which record shall be kept in the department at Washington.

It is the expectation of the officials who have formulated this decision that it will meet the general approval of the trade, and with such changes as may be suggested and agreed to, will ultimately be adopted and promulgated.

Pending Legislation.

During the year some progress was made toward the final consideration of legislation which was proposed in the last Congress for control through Federal law of the manufacture and sale in interstate commerce of paints, in order that the consuming public shall be protected from frauds resulting from adulterated or misbranded paints. Following the hearings held on the bill introduced by Senator Heyburn, of Idaho, chairman of the Committee on Manufactures of the Senate, that committee reported favorably the bill under circumstances which gave indication that the Senate at some date would take up the matter for final disposition. The latest development, however, with respect to this subject came promptly with the opening of the regular session of Congress in December, when expressions were given by Senator Heyburn to the effect that the indications at that time were that there was not such a strong and influential public sentiment favorable to the paint legislation as would warrant the committee in urging the subject upon the attention of the Senate. Other members of the committee have made similar comments, but they assert that the matter is liable to receive consideration in the committee at any time when Senator Heyburn shall be inclined to bring it up for final action.

The most important point brought out by Senator Heyburn on the subject of paint legislation was his rather broad intimation that there is a growing sentiment among the constitutional lawyers of the Senate that to pass the legislation as proposed goes further than the power of Congress will permit under the construction of the commerce clause and other provisions of the United States Constitution. The fact that the lawyers are questioning this procedure brings up the fact that in the minds of many students of the powers of Congress, under the Constitution these powers have been stretched to the fullest limit by the legislation that has been passed relating to the control of the manufacture, transportation and sale in interstate commerce of foods and drugs, such as oleomargarine, whisky, and drug products that are subjected to the limitations of the Pure Food and Drugs law.

Some progress was made also at the House end of the capitol with the pending legislation intended to liberalize the policy of the United States in dealing with oleomargarine and other products manufactured in imitation of butter and sold to the consuming public. Hearings were held upon the Burleson bill in the last Congress, and the subject came over to the special session of the present Congress with the Burleson bill before the Committee on Agriculture of the House. Other measures have been considered, and important recommendations have been made by the Commissioner of Internal Revenue intended to carry out the idea that better protection to the legitimate butter industry can be devised through limitations upon the manufacture and sale of oleomargarine rather than in the high tax imposed upon oleomargarine artificially colored to resemble butter. Early in December Representative Burleson again brought this subject to the attention of the Committee on Agriculture, and a subcommittee was appointed, of which Representative Lever, of South Carolina, is chairman, to consider the subject in all its details and report either the Burleson bill or some modifications of that measure that will satisfy those interested, give the protection which the manufacturers of butter insist upon, and at the same time give encouragement to the tremendous industry of manufacturing oleomargarine and kindred products from the important by-products of the beef and cottonseed oil industries in the country. The manner in which this subject was taken up by the Committee on Agriculture and the consideration of the matter by those who are interested gave rise to expressions by Representative Burleson and others that the House will sometime during 1912 act favorably upon an oleomargarine bill somewhat in line with the provision of the Burleson measure.

Notes.

One of the notable things proposed by the Federal Government, through the Commerce Department, in the closing days of the year, was the making of preparations for an elaborate investigation into the cost of living in general, and especially with respect to the cost of food products. This investigation will be more extensive and far-reaching than any that has yet been proposed by the government. It is expected to carry out the details of an examination into the cost of producing, transporting and selling food products in greater detail than has been contemplated by the government up to this time in the investigations that have been made through the Commerce Department of the wholesale and retail prices of foods. The present investigation, like others of the kind that have been conducted in that department, will be under the charge of the Bureau of Labor. The latest inquiry that was made by the government along this line was through a committee of the United states Senate, and in that work the various executive departments and bureaus of the government participated.

The plans outlined by the Department of Agriculture, through the Pure Food Board, for sending in advance to the trade tentative decisions made by the board, and approved by the Secretaries, who are the executive heads of the operations of the Pure Food and Drugs law, have not proceeded far enough to demonstrate to the department officials how successful this plan will be. Already it is realized that considerable additional expense will be charged against the department because of this policy, which greatly enlarges the correspondence of the government through all the trades that may be directly or indirectly interested in the proposed decisions under the law. It would appear from expressions given by the department officials that expense will be the only thing calculated to prevent a continuance of the system, because most of the officials believe that the plan is a wise one and it probably will devolve upon Congress to determine whether the additional expense is justified.

Corresponding with the work which the various executive departments have done during the past year in the direction of investigating oil, gas, phosphate and potash fields of the country, preliminary steps have been taken in Congress for additional legislation along these lines. A variety of bills are pending in the Public Land committees of the two houses intended to secure to operators the right to prospect and work these valuable deposits, and at the same time save to the Federal Government the fee of the land. Most of these measures proceed along the line of licenses to be granted to prospectors to take from the soil these valuable deposits on payment of what is equivalent to small royalties therefor, the right to operate being controlled by the Federal Government under these proposed laws acording to the character of the operations and time of the life of leases. The Congressional committees are slow to act, because they have not yet been thoroughly advised by the various executive departments, notably the Interior and Agriculture, of all the information presumably to be obtained regarding the character and location of these valuable deposits.

The divisions between the two houses of Congress relative to the changes proposed to be made to bring about the establishment of a public health department of the government have not yet been reconciled to an extent which justifies a prediction at this time that during 1912 any legislation may be secured on this subject. The committees of both houses, namely, Interstate and Foreign Commerce of the House, and Public Health and National Quarantine of the Senate, have held hearings on the subject, and bills have been reported in some form or another during the past year, but nothing has been accomplished that is satisfactory to all parties interested in the subject. Senator Owen, of Oklahoma, author of an elaborate health department bill, reintroduced his measure at the beginning of the December session with some important changes calculated to satisfy those persons and associations in the country who have most strenuously objected to the proposed public health bill, on the ground that it was calculated to establish "a medical trust," or place in the hands of the doctors of the country the right of "arbitrary visitation, search and enforcement of particular medical attendance and prescription" upon an unwilling body of people who may object thereto. The Owen bill, as it was presented to the committee at the close of the year, is shorn of one of the most important features, so far as the differences over the measure have been disclosed up to this time. The Senate committee appears disposed to go much further than the House committee in the creation of a public health department, the House committee giving evidence of a desire to go no further than some extensions of the scope and power of the Public Health and Marine Hospital Service. The difference of opinion in the executive departments of the government as to the wisdom of a public health department still continues to be manifested at different times, and all of these differences, as well as changes of opinion, among the legislators, must be reconciled before any real progress will be made upon legislation on this subject.

Throughout the year there have been repeated efforts to settle a variety of questions pertaining to drug and chemical products, such as the transportation and sale of absinthe, the use of saccharin in foods, and the rates of duty that shall be imposed on importations from foreign countries of sulphur. Importations of sulphur from Japan and Sicily occupied the attention of the customs division of the treasury for some weeks. The issues involved in this question was whether the different grades of imported sulphur approached so near a finished product as to be subject to duty, rather than importation as a crude product, under the terms of the tariff law, free of duty. In the matter of absinthe the officials in charge of the enforcement of the pure food law, taking cognizance that France and some other countries where absinthe in largely manufactured, have passed stringent laws relating to the manufacture and sale of that product, gave out in the early part of December a tentative decision intended to control importations, transportation and sale in interstate commerce of this drug. The saccharin question has troubled the officials of the department and the manufacturers of the product through the entire year. This issue, it will be remembered, arose from the fact that Secretary Wilson, presumably acting upon the instructions of the President, transferred directly to the Remsen Board the issue whether saccharin should be permitted to be used in foods, and this submission of the subject to the Remsen Board was in advance of any action by the Pure Food Board in the department. The Remsen Board decided against the use of saccharin, and an appeal was taken by the manufacturers. Various postponements of the date of the prohibition of the use of saccharin in foods have been autnorized by the three Secretaries of the Treasury, Commerce, and Agricultural departments having control of the question, and no decision has yet been reached as to when the entire or partial prohibition of the use of saccharin shall be enforced.

NEW YORK CHEMICAL MARKET.

The year's business in chemicals as portrayed by the opinions of leading distributors is believed to have slightly exceeded that for 1910. The showing is gratifying, owing to the uncertainty which prevailed at many industrial points while the tariff agitation and labor troubles, both here and abroad, were features not conductive to a heavy buying movement. The paper and soap industries were classified among the most persistent buyers, while the textile, glass, leather and paint trades have bought actively at times, but have shown a conservative policy and a desire to limit operations to actual or nearby requirements. Rumors of a reciprocity treaty with the Dominion of Canada had an unsettling influence, especially on the paper trade, but the enormous demand for paper kept the mills running to full capacity during the greater part of the year. In the department of heavy chemicals, the usual uniform markets for soda ash and caustic soda have been disturbed by competition, due to the entrance into the consuming field of new producers. Bleach displayed irregularity on spot, although contract prices were unaltered. Spot quotations were effected by foreign arrivals and the rise and fall of local supplies. Salt cake varied moderately, but the item was comparatively steady throughout the late spring, summer and fall months. The acid department offered two variable items namely; acetic and oxalic. Changes in the former were governed entirely by the fluctuations in acetate of lime. Oxalic acid was altered in sympathy with conditions abroad and the extent of local holdings. Sulphuric acid was cut 5c. per cwt. in June, but the other acids were without quotable change. Under the miscellaneous classification, acetate of lime was subjected to an occasional revision, and each time a higher price was established. The charcoal market was the dominating feature in the production of acetate of lime and the difficulty experienced in securing sizable quantities was fully reflected in the prices of the acetate. Arsenic established a new low record in prices and the market during the greater part of the year has been in an unsatisfactory condition. The low prevailing prices disgusted some of the largest importers and they actually refused to further handle the item. The course of blue vitriol was toward a higher level and the demand at times was so urgent that large makers were unable to keep pace with contracts. The advancing tendency of the copper market also had its bearing on the prices of the sulphate. Increased production of caustic potash in this country attracted attention, but makers were conservative and no trade was attempted. Carbonate of potash was subjected to slight fractional changes, but developments were not of a character to occasion any unusual price changes. The domestic production of caustic potash increased materially and producers at home will hereafter be factors in the market. Sal ammoniac varied slightly under the influence of the ammonia market abroad, crude saltpeter was effected by conditions prevailing in Calcutta. Below will be found detailed yearly market reports of the principal chemicals handled in the local market, also many tables including price variations for the year as well as other years for comparative purposes.

Heavy Chemicals.

BICARBONATE OF SODA.

Conditions governing this market have not been of a character to occasion any change of prices throughout the past year. The movement was chiefly against previous specifications and production met with its usual steady disposal. In the local market spot offerings commanded a moderate degree of attention and sales for domestic and foreign requirements were sufficiently heavy to keep stocks in limited supply. Contracts were quoted on the basis of 1c. for bulk, 1.10c. for kegs, f. o. b. works, and an advance of .20c. all around for goods delivered in this section, less the usual discount terms.

BLEACHING POWDER.

While contract prices for this item remained stationary at 1.20@1.25c., according to brand, the spot market was subjected to considerable irregularity. At the beginning of the year spot bleach commanded 1.30c., with offerings scarce. Later in January moderate arrivals of German bleach placed the market in freer supply and the tendency became easier, values declining to 1.25c. This level was maintained until the first of March, when the market again weakened under an accumulation and sales were effected at 1.20c. There was no other change recorded until the first week in May. At this time the consuming demand fell off materially, while arrivals from foreign producing sources continued on an elaborate scale; stocks in local hands therefore increased rapidly and dealers cut prices to 1.17½c. in an effort to facilitate rapid distribution. The approach of warm weather only tended to decrease the inquiry and several of the largest consumers fell materially behind on their contract withdrawals. Speculators who had previously bought the item, realized the discouraging conditions confronting them and knowing the poor keeping qualities of this chemical started to liquidate their holdings. These depressing influences were fully reflected in the course of prices and the downward movement carried the market to 1.15c. before it rested on "rock bottom." Most of the speculative stuff was sold at the low basis and a dull and uninteresting market prevailed until August. Labor difficulties late in August at English shipping points restricted the importation of English brands and local supplies quickly depreciated. The withdrawal of spot offerings had a stimulating effect on prices and the market advanced rapidly to 1.30c. The advanced quotations were sustained until the middle of September, when competition caused a reaction to 1.25c. The labor difficulties in England had about subsided by this time, but German importations now fell off owing to the drought throughout the German empire and the suspension of river navigation. This feature had a further propelling influence on the market and spot values again reached the high point of 1.30c. This level was maintained through the greater part of October, although occasional sales were effected at 1.25c. During November, quotations ranged between 1.25c. and 1.30c., with trading active. December witnessed a favorable readjustment of foreign conditions and arrivals came in more freely. Spot bleach, late in the month, sold as low as 1.22½c. and no other alterations was recorded for the balance of the year.

In the table below we give the highest and lowest quoted prices in the New York market for bleach for each month since January, 1908, and also the highest and lowest points touched in each year from 1908 to 1912. The figures are based on the closing quotation each successive week:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan..	1.35	1.20	1.35	1.20	1.30	1.20	1.30	1.25
Feb..	1.35	1.20	1.35	1.20	1.30	1.20	1.25	1.25
Mar..	1.35	1.15	1.35	1.20	1.30	1.20	1.20	1.20
April	1.20	1.15	1.35	1.20	1.30	1.25	1.20	1.20
May.	1.20	1.15	1.35	1.20	1.30	1.20	1.17½	1.17½
June.	1.20	1.15	1.35	1.20	1.20	1.20	1.17½	1.15
July.	1.20	1.15	1.35	1.20	1.25	1.20	1.17½	1.17½
Aug..	1.20	1.15	1.35	1.20	1.30	1.25	1.30	1.15
Sept.	1.20	1.15	1.35	1.20	1.30	1.25	1.30	1.20
Oct..	1.25	1.17½	1.40	1.20	1.50	1.35	1.30	1.25
Nov..	1.25	1.20	2.50	1.40	1.45	1.30	1.30	1.25
Dec..	1.25	1.20	2.05	1.30	1.30	1.30	1.25	1.22½
Year.	1.35	1.15	2.50	1.20	1.50	1.20	1.30	1.15

CAUSTIC SODA.

The influence exercised by increased domestic production and competition of dealers had a disturbing influence on this market and prices were subjected to considerable irregularity during the latter part of the year. In January the market opened at 1.75@1.80c. on the basis of 60 per cent. for 70@74 per cent. and 60 per cent. at 1.85@2c. for small quantities. Car lots were held at 1.72½c. to 1.82½c., according to test. This schedule continued intact until March, when the 70@78 per cent. quotation was reduced to 1.70c.. Business throughout the spring and summer months was not brisk and realizing the increased production due to the entrance into the consuming field of certain Western makers, the feeling in leading trade circles became anxious. While no materials price cutting was resorted to during this period, makers were closely watching each other and for a time hope was expressed that some agreement might be reached whereby quotations would not

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Salicylic Acid
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suffer. Late in the fall, however, competition broke loose and the desire to land 1912 contracts became keen. In November a new schedule was effected and contracts were placed at 1.60@1.70c. on the basis of 60 per cent. for 70@78 per cent. and 60 per cent. at 1.70@1.75c. Toward the close of the year competition was unusually sharp and reports were current that considerable business was placed at 1½c. for 70@78 per cent., although dealers refused to confirm the transactions. Domestic production of dry caustic soda for the year was estimated at 140,000 tons, against 125,000 tons for 1910.

SAL SODA.

Prices for this item continued without alteration throughout the year and there were no new developments to lend color to the market. Production was well sold ahead, and the contract movement was sufficiently active to absorb the output. The glass, paper, soap and color trades were all interested and it is believed consumption was fully up to the yearly average. Contracts were held on the basis of .60c. and up f. o. b. for barrels, less the usual discount terms. Spot lots of concentrated were quoted on the basis of 1⅜c. up, according to quantity, seller and terms of sale.

SODA ASH.

Competition made itself felt at intervals throughout the year and the market was subjected to considerable irregularity. The year opened with demand fair and prices steady at 75@95c., as to test and quantity. As the season advanced, the inquiry became less urgent and distributors resorted to price cutting in an effort to land business. In March the market declined to 72½c, in car lots, for 48 per cent. This level was maintained throughout the summer months and well into the fall. Late in November competition became keener, due to increased production from new Western sources. This materially had an unsettling influence on the general market and while lower prices were not openly quoted, it was believed that material concessions were made in order to land new contracts. At the close of the year light 58 per cent. commanded 67½c. per 100 pounds, basis of 48 per cent., in bulk, and 75c. per 100 pounds, basis of 48 per cent., in barrels, in carload lots, f. o. b. works. Forty-eight per cent. was quoted at 72½c. for car lots f. o. b. works. Less than car lots were quoted by large dealers at 85c. per 100 pounds, basis of 48 per cent. for the 58 per cent., and 90c. per 100 pounds for the 48 per cent., both f. o. b. New York.

SALT CAKE.

The movement of this chemical has continued along quiet lines during the greater part of the year and the market has presented a tame appearance, with the undertone heavy. Unfavorable trade conditions prevailing in the glass industry had a tendency to curtail the consuming demand for sulphate and additional sales of the item were occasional instead of free. The color trade was a moderate consumer, but was largely covered by existing contracts. The year opened at .70c. per 100 pounds. February 1 the price was reduced to .65c. and March 1 to .62½c., where it remained over the balance of the year. The low prices obtained discouraged dealers and some refused to handle the item.

Acids.

ACETIC, 28 DEGREES.

Under the influence of competition and changes in the price of acetate of lime, the acid market has been subjected to more or less irregularity. In January dealers quoted on the basis of 1.65c. for barrels. In February the slow run of business caused competition and prices were cut to 1.60c. A fair business was placed with the paint and allied trades at this level and the demand became sufficiently active to strengthen the situation. Late in March the market was advanced to 1.62½c., where it remained until May, when price cutting was resumed. During the latter part of this month the trading level was cut to 1.60c. and early in June sales were recorded as low as 1.55c., which was the lowest point touched during the year. Toward the close of June the price of acetate of lime was advanced and prices gradually rallied to 1.69c., where they remained for the balance of the year. Prominent Western producers were the prime factors in the price cutting war and Eastern makers were forced to follow suit or lose business.

MURIATIC ACID, 18 DEGREES.

Prices for this item have pursued an even course throughout the year, and there was an entire absence of feature or development to lend color to the situation. Production was adjusted to demand and the output was readily absorbed through contract channels. The trading basis was maintained at 1.15c. and up, according to quantity.

NITRIC ACID, 36 DEGREES.

Although prices of crude materials varied materially at intervals, makers were able to maintain a uniform acid market. Manufacturing consumers appeared to be well covered by contracts and most of the year's movement was through these channels. The year's price range was unaltered from the basis of 3⅞@4¼c., according to quantity.

OXALIC ACID.

Fluctuations throughout the year were confined within narrow limits and the market, as a whole, was steady. Arrivals from England, Germany and Norway were never sufficiently heavy to depress prices below 7c., while an occasional scarcity often caused advances of ¼@⅜c. The market opened at 7.20c. on spot, and never fell below 7c. or advanced above 7¼c. until November, when a scarcity of supplies, due to suspended river navigation in Germany and labor difficulties in England, carried the market as high as 7⅝c. Late in November second hands were able to offer 7¼c. on spot, but early in December the high level of 7⅜c. was again established. The close of the year found supplies in local hands still scarce, with importers holding immediate at 7.30c. and up, according to quantity.

SULPHURIC ACID, 60 DEGREES.

A price revision in favor of buyers was made in June, but otherwise the market remained uniform under a free demand. Leading makers quoted 90c. per hundred pounds in January and it was reported that many contracts were booked at that price. In the spring there was evidence of competition and in June the trading basis was openly reduced to 85c. The broad extent of consuming demand has kept the market in an animated condition and it is believed that slightly over 2,000,000 tons were produced and consumed. The export movement was not unusually heavy and was confined chiefly to requirements in the West Indies.

TARTARIC ACID.

An unusually firm tone characterized the market throughout the year and the tendency of prices was upward. The strength was inspired by a higher market for argols abroad and the difficulty experienced in securing sufficient quantities to meet acid requirements. The year opened with crystals commanding 29¼@29½c., and powdered 29½@30c. Late in May quotations were advanced to 30¼@30¾c. for crystals and 30½@31c. for powdered. The higher trading level tended to restrict heavy transactions and business during the remainder of the year was mostly on a hand-to-mouth basis.

The subjoined table shows the highest and lowest quoted prices of tartaric acid crystals in the New York market for each month since January, 1908, and also the highest and lowest points touched in each year from 1908 to 1912. The figures are based on the closing quotation each successive week:—

TARTARIC ACID CRYSTALS.

	1908		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan....	29¼	27¾	27¼	26½	25¼	24½	29½	29¼
Feb....	28¾	27¾	27¼	26½	25¼	24½	29½	29¼
March..	28¼	27¾	27¼	26½	25¼	24½	29½	29¼
April...	28¼	27¾	27¼	26½	25¼	24½	29½	29¼
May....	28¼	27¾	27¼	26½	25¼	24½	30⅜	29¼
June....	28¼	27¾	27¼	26½	25¼	24½	30⅜	30¼
July....	28¼	27¾	27¼	24½	25¼	24½	30⅜	30¼
Aug....	28¼	27¾	27¼	24½	25¼	24½	30⅜	30¼
Sept....	28¼	27¾	25¼	24½	25¼	24½	30⅜	30¼
Oct.....	28¼	27¾	25¼	24½	25¼	24½	30⅜	30¼
Nov....	28¼	27¾	25¼	24½	28¾	27¼	30⅜	30¼
Dec....	28¼	26½	25¼	24½	28¾	28¼	30⅜	30¼
Year...	29¼	26½	27¼	24½	28¾	24½	30⅜	29¼

Miscellaneous Chemicals.

GRAY ACETATE OF LIME.

Restricted production, due to a scarcity of charcoal, kept the lime market in firm tendency and makers experienced difficulty in satisfying requirements. Contract withdrawals early in the year were sufficiently heavy to relieve former accumulations and by summer the market was practically established on a demand and supply basis. The year opened at 1.75@1.80c. In June the market was advanced to 1.87½@1.92½c., and in November to 2@2.05c. The table below gives the high and low prices of gray acetate of lime in the New York market for each month since January, 1908, and also the highest and lowest points touched in each year from 1908 to 1912. The figures are based on the closing quotations each successive week:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	2.30	2.00	1.55	1.50	2.05	2.00	1.80	1.75
Feb.	2.05	2.00	1.55	1.50	2.05	2.00	1.80	1.75
Mar.	2.05	2.00	1.55	1.50	2.05	2.00	1.80	1.75
Apr.	2.05	2.00	1.80	1.50	2.05	2.00	1.80	1.75
May	2.05	2.00	1.80	1.75	2.05	2.00	1.80	1.75
June	2.05	2.00	1.80	1.75	2.05	2.00	1.92½	1.75
July	2.05	2.00	1.80	1.75	2.05	2.00	1.92½	1.87½
Aug.	2.05	2.00	1.80	1.75	2.05	2.00	1.92½	1.87½
Sep.	2.00	1.50	1.92½	1.75	2.05	2.00	1.92½	1.87½
Oct.	1.55	1.50	1.92½	1.87½	2.05	2.00	1.92½	1.87½
Nov.	1.55	1.50	2.05	1.87½	2.05	2.00	2.05	1.87½
Dec.	1.55	1.50	2.05	2.00	2.05	2.00	2.05	2.00
Year	2.30	1.50	2.05	1.50	2.05	2.00	2.05	1.75

ALUM.

Stationary prices regulated by leading producers were maintained for the different descriptions of the item throughout the year. The even course of values naturally gave the market a tame appearance, although there were intervals of active buying, which occasionally livened up the situation. Withdrawals against contracts were full, with the paper makers and print works the largest consumers. Prices current were 1.75@2c. for ground and 2⅝@3c. for powdered, as to quantity, seller and terms of sale. Sulphate of alumina (filter alum) was held at .90@1.75c., as to quantity.

COMMERCIAL WHITE ARSENIC.

Developments in arsenic have been of a character to occasion considerable irregularity in prices, and the market has been subjected to intervening periods of dullness and activity. Increased production in this country, Mexico and Canada has played havoc with European sellers, and the desire to land business became so keen in June that quotations were cut to 1½c. per pound, which is the lowest price on record. The declining tendency of the market caused more or less dissatisfaction and some dealers refused to further handle the item. As summer progressed an improved demand developed for shipments and a satisfactory business was placed at prices ranging from 1½@1¾c. Toward the latter part of the year it became evident that the summer bookings had about absorbed the output and additional offerings became lighter at gradually advancing prices. In August Canadian and Mexican arsenic dealers withdrew from the market and spot offerings became exceedingly light. Business during the fall months was moderate, with buyers limiting operations to actual wants. Sales in December for immediate delivery were effected at 2.60c., which was the highest price established during the year. The following table shows the highest and the lowest prices of white arsenic in the New York market for each month since January, 1908, also the highest and lowest points touched in each year, from 1908 to December 31, 1911, inclusive. These figures are based on the closing quotations each successive week:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan....	6	4¾	3⅝	3½	3¼	2⅞	2.20	2.12½
Feb....	6	4¾	3.10	3.10	3¼	2⅝	2.12½	2.00
March.	6	4¾	3.10	2⅞	2.55	2½	2.00	2.00
April..	4¼	4¾	3.10	2⅞	2.50	2.45	1.95	1.87½
May....	4¼	3⅝	3	3	2.45	2⅜	1.80	1.75
June...	3⅜	3⅜	3	2⅞	2⅜	2⅜	1.87½	1.50
July....	4	3¼	3¼	2⅞	2.30	2.22½	1.90	1.87½
Aug....	4	3¼	3	2⅞	2¼	2.22½	1.90	1.75
Sept....	4	3¼	2⅞	2⅝	2⅜	2¼	2.00	1.80
Oct....	4	3.20	2⅞	2⅝	2⅜	2¼	2.20	2.12½
Nov....	3⅜	3	2⅞	2⅜	2⅜	2¼	2.37½	2.25
Dec....	3⅜	3¼	2⅞	2⅞	2¼	2¼	2.60	2.50
Year...	6	3	3¼	2⅝	3¼	2.22½	2.60	1.50

BLUE VITRIOL.

Although the first three months of the year occasioned no unusual developments in this market, the advent of spring was accompanied by a decidedly firmer feeling. The early demand was not especially active and producers were able to supply car lots at 4c. per pound. Late in March an increased inquiry placed the market in very limited supply and the sold-up condition of makers practically eliminated car lot offerings on spot. Early in April the pronounced scarcity caused an advance in prices to 4.10c., while at the close of the month makers refused to offer under 4¼c. The month of May brought no relief to the stringent conditions and leading makers refused to offer spot at all. Buyers who were in need of stocks were compelled to accept contracts for delivery two weeks ahead and for these 4½c. was asked. During the summer months, the consuming demand subsided to some degree and producers were able to catch up with contracts. Spot offerings were never excessive, however, and the market was maintained on a steady basis throughout the remainder of the year. The following table shows the highest and lowest quoted prices of blue vitriol for each month since January, 1908, and also the highest and lowest points touched in each year, from 1908 to 1911. The figures are based on the closing quotations each successive week:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.....	5¾	5½	5	4¾	4½	4.10	4	4
Feb.....	5¾	5	5	4.60	4½	4.10	4	4
March..	5¼	5	4.75	4.60	4½	4.10	4	4
April...	5¼	5	4½	4⅝	4½	4.10	4¼	4
May.....	5¼	4.65	4⅝	4.22½	4¼	4.00	4½	4¼
June....	4.90	4.65	4¼	4.22½	4¼	4.00	4½	4½
July....	4.90	4.65	4¼	4¼	4¼	4.00	4½	4½
Aug....	4.90	4.65	4¼	4	4¼	4.00	4½	4½
Sept....	4.90	4.65	4	3.95	4¼	4.00	4½	4½
Oct.....	4.90	4.65	4	3.90	4¼	4.00	4½	4½
Nov....	5	4.65	4	3.90	4¼	4.00	4½	4½
Dec.....	5	4.75	4.10	4.00	4¼	4.00	4½	4½
Year....	5¾	4.65	5	3.90	4½	4.00	4½	4

BRIMSTONE.

Contract prices remained unchanged on the basis of $22 to $22.50, according to point of delivery, throughout the year for this item. The demand during the early part of the year was active, but fell off during the warm weather, owing to the inactivity at the paper mills, due to the agitation over the reciprocity treaty with Canada. Heavy importations of wood pulp from the Dominion also had a restricting influence on the domestic demand for sulphur, but it was admitted that the inquiry for sulphur shipments to Canada largely offset the discrepency in the domestic demand. All told, Canada purchased about 8,000 tons of brimstone during the year. Late in the fall and during December an inquiry developed and business placed was considerably larger than noted for the corresponding period in 1910. In general it is believed that production was slightly larger than in 1910, and that the consuming demand was sufficiently heavy to absorb the output.

CARBONATE OF POTASH, CALCINED, 80@85 PER CENT.

Opening prices proved to be the best for the year, although the high trading level was only maintained during the first three weeks in January. At this time, sales were effected at 3⅞c. per pound. Late in January importers reduced the price to 3½c. for immediate shipments. This basis was maintained until March, when local stocks became limited and the market was advanced to 3⅝c. No other change occurred until May, when freer arrivals from abroad placed the market in more liberal supply and spot prices were reduced to 3.55c. The demand throughout the summer was not of an urgent character, as the soap, textile and glass trades were sufficiently covered by standing contracts and were not forced to buy additional quantities. In August continual arrivals from abroad showed signs of accumulation in local quarters and spot prices were again cut to 3.40c. in an effort to move goods. Trading during the fall months was moderately active, but the demand was never urgent enough to warrant a material advance in quotations. In October additional sales were effected at 3½c. and this price remained unaltered for the balance of the year.

CAUSTIC POTASH.

Paramount among the important developments in this market during the past year was the material increase of domestic production. This item in past years has been largely imported and manufacturing consumers depended on foreign makers for their requirements. The entrance into the field, however, of American makers marked the dawn of a new era and the domestic output for the year is placed at 6,000,000 pounds. The offerings of domestic had no important bearing on prices and there was nothing to indicate a trade war which many expected. Late in the year low grade caustic potash or potash containing more than 10 per cent. of soda was placed under the classification of "chemical mixtures" by the Treasury Department and assessed at a duty of 25 per cent. This naturally caused considerable dissatisfaction to dealers who held standing contracts and complaints were heard in many quarters. The action of the government, it is believed, will eliminate the importation of low grade caustic potash in the future. Prices for the year were established at 3¾@5¼c. for ordinary 45@90 per cent.; 90 per cent. was held at 5¼@5½c., according to quantity.

THE CHLORATES.

Prices for both of these items continued without variation all through the year and the market, while steady, was devoid of particular feature. The potash question abroad tended to restrict offerings for future shipments of chlorate of potash during the early part of the year, but the eventual settling of the matter placed the market in a normal condition. The consuming demand was equal to the yearly average and production of both items met with ready disposal in consuming channels. Contract prices for chlorate of potash were 8¼c. for crystals and 8½c. for powder, f. o. b. works. Smaller parcels commanded from 9¼c. to 9¾c., as to quantity. Chlorate of soda was held at 8¼@9½c. as to quantity, the inside figure representing the car lot price f. o. b. works.

GLAUBER'S SALT.

The glass, color and other consuming industries were moderately interested in this market all through the year and consumption is said to have compared favorably with other recent years. The opening price was 65c. in barrels, but late in January the scarcity of local offerings enabled dealers to advance the market to 75c. The advent of spring found an easier situation and spot offerings slightly freer. Late in March the trading basis was reduced to 70c., and in May to 65c. No other alterations in prices occurred during the year.

NITRATE OF LEAD.

Comparatively narrow price fluctuations were noted in nitrate of lead and the market as a whole was steady. In January spot quotations ranged from 8c. to 8⅛c. per pound. In February limited sales were reported at 7⅞c., which proved to be the low point of the year. The highest price reached was in July, when sales were effected at 8¼c. Throughout the balance of the year the market was maintained on a basis of 8@8⅛c. Trading was quiet and without feature.

SAL AMMONIAC, WHITE GRANULAR.

This is another item whose price range was confined within narrow limits, the total variation for the year being ¼c. per pound. The firm position of the ammonia market abroad had a steadying influence and the domestic demand was sufficiently active to prevent more than temporary accumulations. At the beginning of the year the spot price was 5⅝c. The low prices were reached in February and April and in the early summer months, when sales were effected at 5½c. In August the market was advanced to 5¾c., and no other revisions were made during the remainder of the year.

SALTPETER, CRUDE

The local market was regulated almost entirely by conditions prevailing in Calcutta, and the rise and fall of spot prices was occasioned by the limited or liberal arrivals from India. The lowest prices of spot was established in August, when sales were effected at 4¼c. The highest price noted was in February, when sales took place at 5c. Late in April and early in August the market was in a nominal condition with scarcely any spot stocks available. At the close of the year 4½c. was the prevailing quotation. Consumption for the year is placed at 35,626 bags,

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Arnstein, Inc., Eugene	Chicago, Ill	"Blits"
Atlantic Drier & Varnish Co., Wm. H. Magoffin, Proprietor	Philadelphia, Pa	"Takitof"
Ball Chemical Co	Pittsburgh, Pa	"Ball's"
Berry Bros., Ltd	Detroit, Mich	"Apex"
Bird-Archer Co	New York, N. Y	"Empire"
Bird & Co., J. A. & W	Boston, Mass	"Mistic"
Boston Varnish Co	Boston, Mass	"Boston"
Boyle & Co., A. S	Cincinnati, O	"Var-ni-go"
Bradley & Vrooman Co	Chicago, Ill	"Crown"
Bridgeport Wood Finishing Co	New Milford, Conn	"Bridgeport's Standard
Brooklyn Varnish Manufacturing Co	Brooklyn, N. Y	"Peerless"
Burbank & Ryder Varnish Co	Boston, Mass	"Bunker Hill"
Calman, Henry L., doing business as Emil Calman & Co	New York, N. Y	"Zymolite"
Campbell Glass & Paint Co	St. Louis, Mo	"Cleanoff"
Chalmers Chemical Co	Newark, N. J	"Phenoid"
Chicago White Lead & Oil Co	Chicago, Ill	"Magic"
Crockett Co., The David B	Bridgeport, Conn	"E. Z."
De Ronde, Frank S	New York, N. Y	"De Ronde"
Detroit White Lead Works	Detroit, Mich	"Ab-lu-ent"
Devoe & Raynolds Co	Chicago, Ill	"Cauterin"
Devoe, F. W. & C. T. Raynolds Co	New York, N. Y	"Devoe"
Eberson Paint Co	St. Louis, Mo	"V. & P. Solvent"
Electro Manufacturing Co	Detroit, Mich	"Electro"
Enterprise Paint Mfg. Co	Chicago, Ill	"Noxall"
Flint Varnish Works	Flint, Mich	"Re-mo-vit"
Forest City Paint & Varnish Co	Cleveland, O	"Forest City"
Fuller & Co., W. P	San Francisco, Cal	"Conqueror"
Gillespie & Sons, Chas. H	Jersey City, N. J	"Monarch Bull Dog"
Glidden Varnish Co	Cleveland, O	"Glidden's"
Gould & Cutler, Inc	Boston, Mass	"Eclipse"
Harrison Bros. & Co., Inc	Philadelphia, Pa	"Harrison's"
Heath & Milligan Mfg. Co	Chicago, Ill	"Wizard"
Ideal Mfg Co	Chicago, Ill	"Ideal"
Indianapolis Paint & Color Co	Indianapolis, Ind	"Rapid"
Johnson & Son, S. C	Racine, Wis	"Johnson's Electric Solvo"
Keystone Varnish Co	Brooklyn, N. Y	"23-Skidoo"
Lawrence & Co., W. W	Pittsburgh, Pa	"Klean-itt"
Lincoln Paint & Color Co	Lincoln, Neb	"Lincoln"
Lucas & Co., John	Philadelphia, Pa	"Mirac"
McPhee & McGinnity Co	Denver, Colo	"Magic Solvent"
Messenger Co., F. H	Auburn, N. Y	"Messenger's"
Michigan Paint Co	Flint, Mich	"Se-tab"
Mitchell Varnish Works	Camden, N. J	"Mitraxol"
Moller & Schumann Co	Brooklyn, N. Y	"Hilo"
Palmer-Price Co., The	Newark, N. J	"Eureka"
Parrott Varnish Co., The	Bridgeport, Conn	"Parrott"
Patterson-Sargent Co	Cleveland, O	"B. S. P."
Patton Paint Co	Milwaukee, Wis	"Patton's"
Peninsular Paint & Varnish Co., Ltd	Detroit, Mich	"Peninsular"
Perry-Austen Mfg. Co	Grasmere, S. I., N. Y	"Instint"
Pratt & Lambert, Inc	Buffalo, N. Y	"Expedite"
Prince Paint Co., Jas. H	Boston, Mass	"Zip"
Sherwin-Williams Co., The	Cleveland, O	"Taxite"
Standard Varnish Works	New York, N. Y	"Klensa"
Twin City Varnish Co	St. Paul, Minn	"Kum-Off"
U. S. Gutta-Percha Paint Co	Providence, R. I	"Removall"
Wadsworth-Howland Co	Chicago, Ill	"Jewel"
Wadsworth-Howland & Co., Inc	Boston, Mass	"Magic"
Watson Co., Geo. E	Chicago, Ill	"Faultless"

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compared to 52,478 bags in 1910, 77,345 bags in 1909, and 80,873 bags in 1908. Stocks on hand January 1 were 300 bags, on the way by mail 595 bags, and by cable 3,600 bags, making an apparent supply of 4,495 bags. These compared with 3,075 bags in 1910, 13,386 bags in 1909, and 16,547 bags in 1908. In the following table are given the lowest and highest prices of crude saltpeter in this market during each month of the past five years for purposes of comparison and reference:—

CRUDE SALTPETER.

	1907.		1908.		1909.		1910.		1911.	
	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.
Jan.....	4¼	4½	4	4¼	4	4½	4	4½	4	4⅝
Feb.....	4¼	4¼	4	4¼	4	4½	4	4½	4⅝	5
March...	4¼	4¼	4	4¼	4	4½	4	4½	5	5
April....	4¼	4½	4	4¼	4	4½	4	4½	4¾	4¾
May.....	4¼	4½	4	4¼	4	4½	4	4½	4⅝	4¾
June....	4¼	4½	4	4¼	4	4¼	4	4¼	4½	4⅝
July	4¼	4½	4	4¼	4	4½	4¼	4½	4¼	4½
Aug.....	4¼	4½	4	4¼	4	4½	4¼	4½	4⅛	4¼
Sept....	4¼	4½	4	4¼	4	4½	4¼	4½	4⅛	4½
Oct.....	3.90	4	4	4¼	4	4½	4¼	4½	4⅛	4½
Nov.....	4	4¼	4	4¼	4	4½	4¼	4½	4½	4½
Dec.....	4	4¼	4	4¼	4	4½	4¼	4½	4½	4½
Year....	3.90	4½	4	4¼	4	4½	4	4½	4	5

LONDON CHEMICAL MARKET.

Notwithstanding labor troubles at home and the keenness of competition in foreign markets British chemical industry in 1911 had a very active experience. Orders for domestic consumption were on a liberal scale and business abroad was good despite increased production in certain countries under the protection of tariff walls. The increased proportion of trade done direct between manufacturer and consumer is noteworthy. And further, the combinations between certain large purely chemical firms and great soap concerns with well-established chemical departments cannot fail to be of significance in the future of the industry, not only in this country, but in the markets of the world. As regards price movements, many of these were within very narrow limits, as in the case of citric, oxalic and tartaric acids, while others made but one change, as in alum, which after a number of years at £6 for lump, added 2s. 6d per ton in November to meet the increased cost of labor and other manufacturing changes, or as in caustic soda, which lost 5s. per ton in February, and others yet again did not change at all, bleaching powder selling at £4 15s.@£5 5s. per ton, as to maker; potassium chlorate at 3¾d. per pound for home and 3½d. for export, potassium and sodium bichromates at 3½d. and 3d. per pound, respectively; borax at 16s.@17s. and boracic acid at 25s.@27s. per cwt. for crystals and powder and superphate of iron at 40s.@42s. 6d. Of other important items of this classification the variations are brought out in the following table:—

	Open			Close		
	£	s.	d.	£	s.	d.
Ammonia sulphate.....	12	5	0	13	7	6
Alum, lump.....ton.	6	0	0	6	2	6
powdered	6	15	0	6	12	6
Ammonia sulphate.....	12	5	0	13	7	6
Antimony English regulus	28	0	0	27	0	0
Arsenic, 99@100% Cornish, cwt.	0	11	9	0	11	6
Ashes, Montreal pots.....	0	37	0	0	39	0
New York pots.....	0	35	0	0	35	0
Benzole, 50%.....gal.	0	0	8¾	†0	1	1
Carbolic acid, crude, 60%.	0	1	1	*0	3	0
crystals, 40°.....lb.	0	0	3⅞	0	0	8¼
Citric acid, foreign.....	0	1	3½	0	1	4½
Copper sulphate, Liverpool, ton.	19	10	0	23	5	0
Cream of tartar, 98%.cwt.	0	101	0	0	86	0
Mercury, importers', price per bottle	7	10	0	8	2	6
Oxalic acid.....lb.	0	0	2⅝	0	0	2¾
Potassium prussiate, foreign	0	0	4½	0	0	4½
Soda, caustic, 70% white, ton.	10	5	0	10	0	0
Soda, nitrate, refined.....	10	0	0	10	12	6
agricultural	9	12	6	10	7	6
Tartaric acid, foreign..lb.	0	1	0⅝	0	1	0½

	High			Low		
	£	s.	d.	£	s.	d.
Alum lump.....ton	6	2	6	6	0	0
powdered	6	12	6	6	10	0
Ammonia sulphate.....	13	15	0	12	5	0
Antimony, English regulus	36	0	0	27	0	0
Arsenic, 99@100% Cornish, cwt.	0	11	0	0	11	9
Ashes, Montreal pots.....	0	39	0	0	37	0
New York pots.....	0	35	0	0	35	0
Benzole, 50%.....gal.	0	0	8¾	†0	1	1
Carbolic acid, crude, 60%..	*0	3	0	0	1	1
crystals, 40°.....lb.	0	0	8¼	0	0	3⅞
Citric acid, foreign.....	0	1	5	0	1	3½
Copper sulphate, Liverpool, ton.	23	10	0	19	5	0
Cream of tartar, 98%.cwt.	0	102	0	0	86	0
Mercury, importers', price per bottle.	10	0	0	7	10	0
Oxalic acid.....lb.	0	0	2¾	0	0	2½
Potassium prussiate, foreign	0	0	4½	0	0	4¼
Soda, caustic, 70% white, ton.	10	5	0	10	0	0
Soda, nitrate, refined.....	10	12	6	10	0	0
agricultural	10	7	6	9	12	6
Tartaric acid, foreign..lb.	0	1	1	0	1	0½

*Forward quotation, spot being nominal.
†Nominal.

Commenting on these it may be said that ammonia sulphate, in common with all fertilizers, went into consumption to an increased extent and this, notwithstanding more or less continuous growth in by-product evens. Nitrate, too, shared in the demand, the world's consumption being 2,349,000 tons, against 2,241,000 tons in 1910 and 1,938,000 in 1909. The shipments from South America were larger, but all the same this valuable soda salt finished like the ammonium compound, better than at the start. Ammonium preparations have increased in value. Liquid ammonia (0.880) advanced in October to £25 per ton net delivered; ammonium carbonate is dearer by the removal of the 10 per cent. discount for 1912 delivery and by the addition of ¼d. per pound towards the close of the year, bringing crystals to 3⅝d. and powder to 3⅞d. net; ammonia chloride by increments rose to £27 10s.@£29 10s. per ton, as to size of crystals, for 5 ton lots. Antimony rose on the formation of a combine of regular makers in Europe, but the understanding failed to continue and values accordingly receded. Arsenic has continued to feel the loss of American support. Pearl ashes have been extremely scarce and nominal in quotation at 40s.@41s. per cwt. and Montreal first certificated went dearer. The benzole market has been in increasing stringency on the excellent demand for motor spirit. Crude carbolic acid reached "war" prices under the stimulus, first of the Manchurian plague and later of good buying by the European military service departments in anticipation of international trouble, following the Morocco crisis and still later by the internecine struggle in China; crystals of course have also responded to these influences. At one time it looked as though the benzole situation might lend itself to the profitable production of "synthetic" carbolic and so frustrate the further soaring of the acid from the coal-tar fraction, but the advancing course of benzol did not assist the enterprise. Copper sulphate was in excellent request, especially for Continental countries, which cannot make sufficient for their requirements. Cream of tartar on the improved condition of the European vintages fell away. Mercury importers have had a long struggle with second hands, but after more than one dozen movements in the official quotations the outside market was finaly non-plused. The question of the renewal of the agreement in respect of the chief Spanish mines was due for consideration in 1911, but the contract was renewed with Messrs. Rothschild. A material advance in pig lead brought English red lead to £17 17s. 6d. and foreign to £17 15s. per ton, while English white was quoted at £20 15s.@£21 5s. at the close and paint at £24@£24 15s. ex ship.

ANTWERP CHEMICAL TRADE CONDITION.

The general condition of the Antwerp chemical market during 1911 was approximately as follows:—

BLEACHING POWDER—Has rather been neglected with intervals of a slightly better demand, but it moved on slowly at 10 to 11 francs, according to quantities. A little advance has recently taken place at 11.25 francs.

SULPHATE OF COPPER.—In the beginning of the year, prices stood at 48@49 francs, with but little inquiry; end of February demand improved for the coming season and quotations were firmer at 50@52 francs with a fair business doing. In April prices declined again in value, but owing to better inquiry and scarcity of stocks, there was a sharp rise in May at 58.50@59.50 francs with plentiful orders. Prices had fallen off considerably in June, but spot supplies continued scarce and dear at same rates. The following month the market situation became weaker again and business was being booked, for spring shipment, at 48.50@49 francs. October-November was meeting with rather more inquiry and prices increased to 53 francs. Prices have been well maintained on account of scarcity for spot delivery.

CHLORATES—Have been steady and uneventful at conventional price of 80.50 francs.

SULPHUR.—There were no changes of any importance to record. Prices, as a rule ranged from 11.25 to 12.50 francs and market generally was quiet.

PRUSSIATES—Maintained a steady position until end of April, at the current quotations of 67.50@69 francs and 96@98 francs for soda and potash, respectively. Potash being of slow request, prices dropped to 94 francs, to harden in August, owing to better demand. Soda dull, End of November the market had become more active and 70 francs for soda and 104 francs for potash were being obtained; the latter was hardly to be had for spot supplies.

ARSENIC—Has been very flat and best makes were freely offered at 25.50@26 francs. Supplies continued plentiful and were far in excess of requirements. Stocks were difficult to move, prices showed but little sign of improvement, and continued in buyer's favor at 24.50@25 francs, according to quantities, with a downward tendency. In December goods became rather scarce on the spot and higher prices were being obtained for early delivery; 26@27 francs was the range.

BICHROMATES—Have been in fair request and prices were 69 francs for soda and 79 francs for potash.

BORAX—Was steady at 40 francs, and business somewhat on the quiet side.

ACETATES OF LIME—Have been in rather good demand generally, and prices for brown steady from 15.50 to 16.50 francs; gray, slower of sale, was quoted 22@25.50 francs.

ACETATE OF SODA—Only in poor request and prices nominal at 39 francs; some time ago they declined to 37 francs, and market dull.

ACETATES OF LEAD—Have been been meeting with a steady sale and prices generally quoted were 58 francs for white and 50 francs for brown; on account of fair inquiry, and in view of some falling off in the production, 61.50 and 52.50 francs, respectively, were being quoted.

NITRATE OF LEAD—Sold at 63.50 francs with improved inquiry, and other acetates firmer in sympathy.

OXALIC ACID—Was somewhat quiet at 57.50 francs, but recently prices show an upward tendency, good being rather scarce, and 61 francs was being obtained.

POTASHES.—There was a good steady business doing in caustic and carbonate, all grades; caustic 88/90 per cent. sold freely at 55.50 francs, and carbonate 90@92 per cent. at 40@40.50 francs. On account of scarcity of raw materials and a good demand, the market had become firmer.

AMMONIA SALTS—Have been in good general request. Muriate was fairly active and prices ranged 57@60.50 francs; other ammonia products also quite firm in price, with a fair business doing.

GREEN COPPERAS—Was freely offered at low rates. Goods were plentiful and cheap and did not show any improvement.

TIN AND ZINC SALTS—Were moving off fairly well and were upheld in prices by the metal position.

CHEMICALS GENERALLY—Continue in good demand, and in all the principal branches of the trade prices stand firm, with rather an upward inclination. This tendency is more noticeable in chemicals and raw materials, which are now or are likely to be effected by increased freight and transport costs, and the higher costs of fuel and labor. The market possesses an element of buoyancy, which has promised well for the first quarter of the year, and there are indications that the activity in business will continue much beyond that time.

SICILIAN BRIMSTONE SITUATION.

No important developments characterized the market last year.

The financial situation of the Consorzio was materially strengthened, its fifth exercise closing with a surplus of $2,000,000.

The understanding with the Union Sulphur Company, of New York, was renewed to the mutual satisfaction of the interested parties, assuring the maintainance of present values. A feeling of confidence pervades the trade, which will, doubtless, contribute to an expansion of business.

The total receipt of sulphur during last year from 457 mines in activity was 373,469 tons, against 395,836 tons in 1910. An increase of output during the present year is not to be expected since two large mines, yielding together over 40,000 tons, are shut.

Exportation during 1911 aggregated 456,230 tons, against 396,120 tons in the preceding period.

The above figures speak for themselves. Production decreased by 22,367 tons and there is no immediate outlook for an improvement. Exportation increased by 60,270 tons.

The total exportation to the principal countries of the world in 1911, compared with the year before, is as follows:—

	1911. Tons.	1910. Tons.
France	115,300	95,230
Italy	75,400	63,200
Germany	28,600	30,230
Austria-Hungary	35,700	29,800
Russia	23,485	25,870
Greece and Turkey.....	25,300	21,090
Scandinavia	30,200	20,210
United Kingdom.....	19,800	19,085
Spain and Portugal.....	22,550	18,700
Belgium	10,300	14,315
South Africa	13,850	12,830
United States.....	8,560	12,060
Holland	12,650	9,730
Australia	13,375	8,200
South America.....	4,940	6,350
British colonies.....	5,075	4,380
Other countries.....	11,085	6,780
Totals	456,230	396,120

NEW YORK DYESTUFFS MARKET.

The growth of the dyeing industry is indicated by the report of the Census Bureau, which shows that in 1909 the number of establishments engaged in dyeing was 426, or a gain of 18 per cent. over 1904. While these are the latest figures at hand, it is supposed that the past two years have brought a corresponding increase. In the year under review decided progress may be reported in the production of fast colors. Many articles listed among the materials of the dye market have been used by other industries also and their activity has been thereby increased. Increased consumption is reported for albumens, cutch, dextrines, starch, turmeric and zinc dust. Lower prices were recorded for albumens, aniline oil and salt, and cutch. Bichromates were lower for 1912 deliveries, but they are quoted on a basis f. o. b. works instead of delivered, as was formerly the case. Dextrines and starch were higher than in 1910 and were constantly changing in price. Gambier was another uncertain article and zinc dust was higher or lower according as the spot supply was small or large. Indigo was in demand only for the synthetic grades and the natural dye was almost neglected. According to statistics for the fiscal year prussiates suffered a decline in consumption. Sumacs labored under the heavy handicap of high prices. The year opened with high prices quoted and declines were more than accounted for when the Italian government converted commercial vessels to the uses of the navy. Myrabolanes and turmeric were in similar positions inasmuch as the local market suffered because of light stocks in the primary markets.

Aniline Oil and Salt.

Governing conditions and prices were subject to but few variations in the market for aniline oil and salt. Beginning the year new contracts were entered into with seasonable regularity, and prices were quoted at 11½@11¾c. for oil and 10@10.15c. for salt. Jobbing trade continued throughout the year, but was spasmodic, and business was not brisk at any time, even during the fall months, when the textile trades were good buyers. In October a reduction in price was made, so that quotations read 10¾@11¼c. for oil and 9¼@9¾c. for salt, and these figures were in force for the balance of the year. The reduction was not due to a heavy buying demand, but was the result of an accumulation of stocks, and was the means taken by sellers to induce buyers to enter the market. Interest in new contracts began to appear in November and December, and there was also a better demand for current needs, due to a good request from buyers.

Albumen.

Dyers, tanners and other manufacturers who are large consumers of albumen opened the year by taking good quantities of egg and blood albumens at 46@68c. for egg and 23@32c. for blood albumen. Towards the end of January supplies of egg albumen became freer and the cheaper grades were quoted at 45c., and early in February blood albumen was lowered in price by dealers who were anxious to move stocks, and 22@32c. became the ruling quotation. Although some large tanneries were idle during the spring, demand for both kinds of albumen was on the increase. Towards the end of April there was a sharp advance in egg albumen, and figures were placed at 50@75c. The increase came as a result of short stocks and smaller arrivals, and also was largely due to new bacterial tests which had been established by our government for testing albumen for edible purposes. These tests did not apply to albumen except those intended for edible purposes, yet large quantities were held by the government because the stocks did not meet the requirements of the newly established tests, and this action helped to diminish available supplies. During May there was an increased demand for blood albumen, and prices again receded to 23@32c. Calico printers and tanners were heavy buyers at these figures, and as foreign stocks were light and domestic supplies firmly held prices were firm and steady through the slower summer months until the first of October, when ample supplies induced a reduction to 22@23c., at which figures egg albumen closed the year. The trouble in China had the effect of curtailing supplies of egg albumen during the fall, but supplies from other sources were heavy and prices were maintained at 50@75c., although the close of the year found a tone of weakness caused by stock accumulations and quotation prices were not strictly adhered to in all sales.

Bichromates.

During the early part of the year trading in bichromates was marked by no especial features. The prices of 7⅜@7¾c. for bichromate of potash and 5⅝@5¾c. for bichromate of soda were firmly adhered to. A good volume of business was transacted, a fair jobbing trade being added to the regular withdrawals on contract. Bichromate of soda has gradually been cutting into the field of bichromate of potash, and while the latter was in good demand throughout the year much greater activity was shown in the market for bichromate of soda. During the warm weather there was a decrease in consumption of all kinds of bichromates, but the reaction was but temporary. During the fall a new plant for the manufacture of bichromate of soda was opened in Maryland and deliveries were made by the new company at the close of the year. During November announcement was made of the contract prices covering deliveries for 1912. These prices are 6⅞@7c. for bichromate of potash and 5@5½c. for bichromate of soda. It will be noted that these figures are lower than those quoted for 1911, but the prices for 1911 include delivery, whereas those for 1912 are f. o. b. works, so that the cost of freightage must be borne by the purchaser. Then, again, the 1912 quotations were established by the company which is the largest manufacturer of bichromates in this country, and when announcing their prices they also stated that the company would deal direct with the consuming trade instead of through sellings agents as heretofore. While the making of contracts on a basis f. o. b. works might seem likely to lead to a price-cutting war in order to secure trade at a distance from works, such will not be the case, for the demand for bichromates is sufficient to

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account for the available supply, and manufacturers are not obliged to compete with one another in order to dispose of their outputs. As a matter of fact, there is but one company in this country now engaged in the manufacture of bichromate of potash, although it is probable that one and possibly two other companies may enter the field during 1912.

Cutch.

The use of cutch as a dyeing material is on the wane. The decrease during the past year was not strongly marked, but the dyeing trade is rapidly expanding and the decrease in the demand for cutch is greater from a relative than from an actual sense. Tanners have been large consumers of cutch during the year, and a good demand was experienced from makers of boiler compounds, so that the consumption of cutch during 1911 showed a gain over the preceding year. Shipments from Rangoon to all parts amounted to 6,250 tons, compared to 3,600 tons in 1910 and 2,400 tons in 1909. At the beginning of the year 6½@7c. was the quotation for spot bales, and trade was light with stocks light. Toward the end of January supplies increased and prices receded to 6@7c., but these figures held only for a week, and quotations then were 6½@7c. Demand then fell off and as low as 6c. was quoted in March, and about the middle of April stocks began to accumulate and buyers were inactive, which caused a further drop in prices to 5¾@6c. The tanning trade was dull during the summer, and 5½@6c. was quoted in August, but with the fall months business took on a healthier tone and 5¾@6c. again became the quotation for spot bales, and this price held until the middle of December, when 5½@6c. was again obtainable, and at this quotation the market closed for the year.

Dextrine.

Very low figures were in effect at the beginning of the year, dextrine being quoted at $2.17 per 100 pounds, in bags and $2.33 in barrels; special dark canary $2.27 in bags, $2.43 in barrels; British gum $2.42 in bags, $2.58 in barrels. The second week of January saw a further decline of five points which was said to be due to competition and to sluggish trade, while the large corn crop of the previous season gave a bearish sentiment to the market. About the middle of April a ten point increase was announced, supposedly due to the fact that stocks were diminished, although dealers asserted that frequent price changes had caused buyers to take on only small lots at a time. Within a week a five point increase followed and the first week of May another five point increase became operative and this in turn was augmented by a ten point raise the following week. The advancing corn market was given as the reason for these advances, the latter part of June saw a still further increase of five points and the first week of July, owing to continued dryness in the West and fear of a possible failure of the corn crop, prices were raised by twenty-five points, and towards the end of the month a seven and one-half point increase went into effect. Better reports from the West caused a five-point decline on Sept. 1, but the decline was regained the middle of the month and later in the month a five point advance was registered, and controlling interests claimed high prices were due to the strong position of corn at home and poor reports from abroad as well as to reports of a poor potato crop abroad. The last week of October saw a ten point raise of prices, then came a change and from the middle of November until December 20 five ten point decreases followed one another in rapid succession, and they in turn were followed by a ten point advance just as the year was drawing to a close. The final price scheduled of the year was: dextrine, $2.75 in bags, $2.71 in barrels; special dark canary dextrine, $2.67 in bags, $2.81 in barrels; British gum, $2.82 in bags, $2.96 in barrels. The lowest price of the year was reached early in January and continued to the middle of April, when dextrine ruled at $2.12@2.28. The highest price was in effect from about the middle of October to the middle of November, and the price of dextrine was quoted $2.97@$3.13.

Gambier.

At the beginning of the year the market for gambier was quiet with 5½c. ruling for spot goods ex store. Good quantities of stocks afloat gave a tone of easiness to the market and prices went down to 5@5¼c. for store goods and 4¾c. was obtainable ex dock at certain times when arrivals were not being taken rapidly enough to satisfy sellers. The demand for the first three months of the year was small and low prices prevailed throughout that period although about the middle of March a fractional increase was registered and quotations were held at 5¼@5½c. Consumption did not show signs of improvement in April and quotations declined to 5⅛@5¼c. and the month closed with offerings held at 5c. and this in spite of the fact that spot supply was only from 200 to 300 tons. Throughout May the dullness in trading became more pronounced at 5c. than could be obtained by buyers at any time during the month. Business improved somewhat in June with tanners and silk manufacturers taking more interest in the market, and prices stiffened accordingly to 5½c. and the month closed with 5¾@6c. as the asking price. The advance in price, however, was due more to small stocks on hand and to firmness in the primary markets rather than to active demand from consumers. The first half of the year showed a big falling off and consumption of gambier was smaller than for many years. The figures of shipments from Singapore for the six months as shown by the following table indicate to what extent consumption had decreased:—

	1911. Tons.	1910. Tons.	1909. Tons.
To United States...	2,780	3,590	5,160
To Great Britain...	1,725	1,780	300
To Continent.....	2,800	5,120	2,945

The decline in consumption no doubt was largely due to the poor position of the tanning industry. During July arrivals were mostly on account of old contracts and the spot supply was not increased, hence prices were held at 6c. during the month, but shipments were easier, due to reports of large consignments to this country. In the month of August buyers held off at first as lower prices were expected and early in the month a shipment of 1,500 tons reached the local port and prices went to 5c. ex dock, with 5½c. held ex store, and later on 5½c. was quoted ex store. An advance in price in the primary market brought about a good movement in September, as buyers realized that the local market was low in price. This buying movement reduced stocks and in October 6½@7½c. was quoted, and offerings were small as only 80 tons reached the local market during September. During the latter part of October 6¾@7c. was quoted for store goods and early in November 7c. was the lowest price at which spot goods were offered. Supplies from the primary markets were much better late in the year and in December 6c. was quoted and the year closed with 6⅛@6¼c. asked for spot goods. A study of the price fluctuations for the year shows that 5c. was the lowest and 7½c. the highest prices asked for spot offerings. The market was fairly active during the last half of the year and statistics show that shipments in that period were far in excess of those for the first six months, and even exceeded those of the corresponding period of 1910. Shipments from Singapore for the twelve months were as follows:

	1911. Tons.	1910. Tons.	1909. Tons.
To United States...	7,740	8,500	10,175
To Great Britain...	3,335	3,685	5,845
To Continent.....	5,455	10,100	6,040

Hyposulphite of Soda.

Hyposulphite of soda has occupied a steady position throughout the year. The quotation prices have remained at $1.30@1.50 for barrels and $1.40@1.60 for kegs. Demand for the most part was steady and the variations in activity are traceable to the activity of the tanning trade, which has proved the greatest consumer of this article. The dyeing trade is not any better than it was a year ago, and as the trade is expanding it is readily seen that the use of hyposulphite of soda by dyers is relatively decreasing. Paper manufacturers and the photograph trade have proved good consumers during the year and combined demand has caused a steady flow into consuming channels.

Indigo.

According to the government figures of imports, the consumption of indigo in this country showed a gain over 1910. Exports of indigo for 1909 amounted to 8,537,413 lbs.; in 1910, 6,787,497 lbs.; in 1911, 7,194,136 lbs. These figures include both natural and artificial indigo and the latter kind constitutes by far the bulk of the indigo imported and used in this country. The use of the natural product is becoming more and more confined and interest centers principally to what is being done in India to revive the industry. The problem of the planter is to reduce his cost of manufacture, and, if necessary, his margin of profit so that he may market his product on the same terms as, or better than the synthetic; to so improve his methods of manufacture as to give his customer the same level quality that the latter can depend upon in case of synthetic; to be able to export or to supply natural indigo in the form that customers find most convenient. The following is the final general memorandum of the season 1911-12 issued by the Commercial Intelligence Department, India:—On the average of the five years ending 1909-10, the area under indigo in the four provinces dealt with in this memorandum represented some 98 per cent. of the entire area under indigo in British India. In the five years named the average total area of the reported indigo crop in these provinces was some 360,000 acres, while that in 1910-11 was 276,400 acres. The total area of the present season is estimated at 271,100 acres, which represents a net decrease of 5,300 acres or nearly 2 per cent. on the figure for 1910-11. As compared with the average of the five years ending 1909-10, the present area falls short by 25 per cent. The total yield of dye is estimated at 48,700 cwts., which is more than last year's figure by 2,700 cwts. or 6 per cent. In Bengal and Madras the season has, on the whole been fairly favorable, but in the Punjab and the United Provinces the crop suffered from deficient water supply on account of drought. The following is a summary of the provincial reports. The figures in brackets following the name of each province, indicate what percentage of the total indigo area of British India is ordinarily cultivated in the province:—

Bengal (37.6 per cent.)—The total area sown is estimated at 110,600 acres as compared with 117,000 acres last year—a decrease of 55 per cent. In the early part of the season weather conditions were generally favorable, but the defective rainfall in July and the excessive rainfall in August considerably affected the outturn from second cuttings in the important districts of North Behar. Damage was caused by insects in places. The total yield is estimated at 25,800 factory maunds (equal to 17,900 cwts.) as compared with the trade estimate of 24,000 factory maunds (equal to 16,600 factory maunds (equal to 16,100 cwts.). Last year the revised official estimate was 21,700 maunds (equal to 13,900 cwts.) against the trade estimate of 20,000 maunds (equal to 12,400 cwts.).

Madras (33.5 per cent.)—The total area under indigo in "raiyatwari" villages up to the end of November is reported to be 53,600 acres, which is 12 per cent. more than the area at the corresponding date of last year. The increase is attributed to timely rain and to the high price of the commodity. The condition of the crop is reported to be fair to good and the expected outturn is estimated at 75 per cent. of normal. On the basis of these figures the total area and yield in "raiyatwari" villages for the whole of the current season may be estimated at 91,200 acres and 21,400 cwts. respectively as compared with 81,500 acres and 19,900 cwts. last year. Villages "other than raiyatwari" report a total area of 3,200 acres expected to yield about 800 cwts., as against 1,300 acres and 200 cwts last year.

Punjab (14 per cent.)—Now reports the total area to be 36,600 acres as against 45,400 acres last year a decrease of 19 per cent. The season has been generally unfavorable, owing to a deficient supply of water in canals for irrigation. The yield of seed is estimated at 793,300 "sers" (equal to 13,300 cwts.) and of dye at 336,500 "sers" (equal to 5,600 cwts.)

United Provinces (12.9 per cent.)—The total area now reported is 29,500 acres, compared with 31,200 acres last year—a decrease of 5.4 per cent. The crop suffered severely from hot winds and the drought of July-August, which retarded the growth of the plants. The total yield is estimated at 4,500 factory maunds (equal 2,000 cwts.), compared with 5,100 maunds (equal 3,500 cwts.) last year—a decrease of some 14 per cent. The quality available for the Calcutta market will probably be less than the estimated outturn, as some portion of the dye is consumed locally.

EXPORTS.

The exports by sea to foreign countries in each of the last five years have been (in hundredweights):—

From	1906-1907.	1907-1908.	1908-1909.	1909-1910.	1910-1911.
Calcutta	19,309	16,627	17,698	11,221	10,985
Madras Port.	11,159	10,619	4,636	3,655	2,364
Bombay	2,367	2,906	856	1,828	740
Karachi	2,246	2,336	1,751	1,357	2,850
Rangoon	....	21	2	5	....

The exports from Calcutta of the past season's crop during the eight months, April to November, 1911, were 2,180 cwt., compared, with 848 cwt. in the same months of 1910 from the crop of 1909-10.

In the local market prices for most varieties were merely nominal and quotations were:—Bengal, low grade, 67½c. per lb.; medium, 75c.; high grade, 80@95c.; Kurpahs, 50@60c.; Guatemala, 65@80c.; Madras, 58@65c.; J. (synthetic) 18@20c.

Myrabolanes.

A review of the year discloses very quiet conditions prevailing for myrabolanes. Stocks were not heavy at any time but the demand was not strong enough to suffer on that account. Prices fluctuated somewhat throughout the year. At the beginning of the year $25@28, as to grade was asked and stocks at the principal markets of the world were admitted to be small. Towards the close of January $24@27 was offered by sellers, and tanners were influenced to take on job lots. Buying, however, continued of a small nature, and in the middle of February a further decline was announced and $23@27 was the accepted quotation, and this in turn was reduced to $22@26 in April. About the middle of May a firmer market was reported at the primary centers, and the local market went back to $23@28, which quotation remained effective until December when $24@28 was quoted, although the price was not firm and many sales were made at the former price. Reports from India stated that the supply of nuts was small and that offerings were lacking in quality. Figures of stocks landed in London show that the year fell far behind that of 1910, and as London is a source from which large supplies are obtained for the local market it is fair to assume that arrivals here have shown at least a corresponding decrease. The figures of the London market are:—

	1911 Landed.	1911 Delivered.	1911 Stock.	Stock 1910.
January	43	66	229	60
February	125	168	186	60
March	323	434	167	74
April	260	309	118	80
May	75	14	179	155
June	152	129	192	226
July	7	33	197	246
August	..	4	193	326
September ...	67	61	200	308
October	28	39	189	294
November ...	32	73	148	309
December ...	..	8	140	252
Totals 1,112		1,247		

In 1910 the total landed was 1,814 tons and the total delivered was 1,613 tons.

Prussiates.

The most important movement in prussiates was on contract orders and consequently the market was fairly steady throughout the year. A jobbing trade for the different varieties was not of a nature to disturb the market to any extent. At the beginning of the year prices were:—8¼@8½c. for prussiate of soda, 28@30c. for red prussiate of potash, 13¼@13½c. for yellow prussiate of potash. The year opened with quiet trading and contract withdrawals furnished the bulk of business. Business was of a routine nature for the first six months with nothing to disturb the even tenor of the market. A line on the activity is afforded by a comparative study of the government figures for the fiscal year 1911 and 1910. According to these figures imports of prussiates were as follows:—

	1911. Pounds.	1910. Pounds.
Red prussiate of potash....	55,082	65,777
Yellow prussiate of potash..	1,777,313	2,330,871
Prussiate of soda.....	1,196,661½	1,299,840

From the above figures it will be seen that imports of all varieties of prussiates show a loss as compared with those of the preceding year. Price fluctuations during the year were few, but in the latter part of March a slow demand brought about a decline in prussiate of soda, and 8⅛@8¼c. was quoted, but the next week the figures went back to the old quotation. In August yellow prussiate of soda was lowered to 13⅛@13½c. and red prussiate of potash to 26@30c. Prussiate of soda was then quoted at 13c. and for some time the price was unsteady, fluctuating from 13 to 13⅛c. In the first part of December, in the face of lower offerings and stronger demand, prices were raised to 8⅜@8¾c. for prussiate of soda, 13⅛@13½c. for yellow prussiate of potash, 26@30c. for red prussiate of potash. At these figures the market closed for the year with considerable orders having been made covering delivery over 1912.

Starch.

The most important feature of the year's trading in starch has been the frequency with which prices have changed. At the beginning of the year pearl starch was quoted at $1.42@1.58; Buffalo pearl starch, $1.44½@1.60½; powdered starch, $1.47@1.63; Buffalo corn starch, $1.49½@1.65½. Shortly after the new year a decline of five points was made and business was stimulated thereby. The bearish effect of the large corn crop of the previous season was given as a reason for the decline in price. The market continued steady until the middle of April, when a ten point raise was announced and the next week this was followed by a five point raise. The first week of May saw another five point advance. The reasons assigned for these frequent price changes were the increased demand and the decreasing influence of the bumper corn crop. With the advancing corn market another ten point raise was recorded the second week of May, and then came a lull until along toward the end of June, when five additional points were added to the asking prices. Continual dryness in the West and fear of a possible failure of the corn crop caused a sharp advance of twenty-five points in the first week of July. This was supplemented by a seven and one-half point advance later in the month, but with the first of September came a decline of five points, which was recovered at the end of two weeks. Increased demand together with the strong position of corn caused a further five point increase the next week and prices then were unchanged until after the middle of October, when ten points were added to the demands of sellers. The middle of November brought a change in the situation and the large corn crop was given as the reason for a ten point decline. This was followed by four decreases of ten points each, and just as the year was coming to an end a raise of ten points was made. The closing quotations were:—$1.82@1.96 for pearl starch, $1.84½@1.98½ for Buffalo pearl starch, $1.87@2.01 for powdered starch, while, as before stated, the feature of the trading is a history of prices yet the volume of business is reported as showing a gratifying gain over the previous year.

Sumac.

Sumacs opened the year at the high figures of $54@56 per ton for spot and $53@54 for shipments. The local demand was poor, but firmness was given to the market because of strong position in the primary markets. Conditions remained unchanged throughout the month of January, but toward the

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close of February shipments became easier and were quoted at $52@53 and the lack of new business forced a drop of spot goods to $53.50@54.50. These prices continued in force until well into May supplies became more plentiful and as low as $51@53 for spot and $49@51 for shipments was quoted in the local market. In June the lowest prices of the year were reached when $50@52 and $48.50@49.50 were the respective quotations for spot and shipments. The lower prices, however, were of short duration, for in July a cholera scare arose in Italy and Sicily and there was a temporary interruption of Mediterranean freight. As a result prices again increased and offerings brought $53@54 spot and $52@53 shipments. Business did not respond to these prices, and a dull season followed so that late in September sellers lowered prices from two dollars to three dollars a ton in order to bring buyers into the market. Advices from Sicily about the first of November stated that the crop was exceptionally late. Heavy rains in July caused plants to grow to a considerable height and cutting did not begin until the middle of August and was slow at first on account of poor weather. Favorable conditions prevailed later and the crop was cut and dried and was up to the standard in quantity and quality. From this report a better feeling was generated in the local market and buyers were looking for ample supplies and price reductions when the Italian war became a factor and upset market calculations. The Italian Government took possession of vessels which regularly were used for commercial purposes and shipments were so uncertain that dealers would not book orders without cabled acceptance of same from primary markets. December saw no change in the situation and the fact that grinding in the primary markets was far under the average added to the dismal aspect of the local market.

Turmeric.

High prices have ruled for the various grades of turmeric all through the year. The year opened with no exports from primary markets having been received in a long time The local consumption was small, but owing to firmness in India prices were steady at 5@5¼c. for Aleppy, 5¼@5½c. for Pubna, 5⅝@6c. for Madras. In London conditions were a great deal similar to those here and supplies were correspondingly scarce. The consumption of turmeric in the United States is unimportant compared to that of Europe, hence the stagnation in the London market is a truer reflex of the poor conditions existing in the primary markets. In February advices from Calcutta stated that the new crop was favorable, but that hold-overs from the old crop were not desirable. Early in March call on diminished stocks caused a stiffening in the quotation for Madras and 5¾@6c. became the asking price. Nothing further occurred to disturb the quietness of the market until June when good reports concerning the Madras crop gave an easier tone to the market and prices dropped to 5½@5¾c. Aleppy also felt the effects of better supplies and about the middle of July was quoted at 4⅞@5c. and a month later at 4¾@5c. Pubna was very steady in price and registered but one change which was made in October when a quarter-cent increase made the quotation 5½@5¾c., at which figure it closed the year. Aleppy was on a gradually increasing scale, and by practical raises went to 5⅜@6c. in the middle of December. Reports that the Bengal crop was a partial failure helped to increase selling prices. Madras also felt this influence and was quoted at 5¾@6¼c. in October, which figure was thereafter maintained. Comparing the fiscal years ending June 30, 1911, and June 30, 1910, an expanse in local consumption of turmeric is indicated as the value of imports, for the former is placed at $41,609, and for the latter $28,077. Higher prices would make up a part of this difference, but not entirely so, hence it is possible to show a slight gain in consumption.

Zinc Dust.

The year under review was quite important as far as this article was concerned, isasmuch as imports are reported as exceeding those of the former year and considerable progress was made in the way of producing a domestic supply. For the fiscal year 4,269,120 pounds were imported, most of this coming from Germany. The range of prices throughout the year was considerable, 6c. being the lowest and 8c. the highest price quoted, the latter is a full cent higher than the high mark for the year 1910. Prices were lower early in the year, and for the first six months there were only fractional changes, and as decreases were followed by increases, the general market was not subject to much change. From August until the close of the year the market was higher. The suspension of river navigation in Germany, because of excessive drought, sent the price of zinc dust to 7@7¼c. in August, and as spelter became higher abroad at that time 7¾c. was reached before the end of the month, and in September 8c. was the asking price. Prices in the local market then depended upon the amount of spot stocks. When arrivals became accessible 7¾c. was accepted, but when supplies ran low 8c. and in some cases even higher figures were asked.

NEW YORK COTTONSEED OIL MARKET.

All conditions considered, the year in cottonseed oil was a normal one and the production of 3,300,000 barrels of oil from the 1910 crop was fully consumed by the end of the crop season, August 31, 1911. The range of prices was irregular. At the beginning of the year spot oil commanded 7⅝c. per pound. From this price the drift was gradually downward until the second week in July, when the market rested on a 5½c. basis. There was little change from this price until late in August, when an advance took place and prices were carried to 7½c. This level was reached late in September, and from that time until the close of the year the movement was downward. The lowest price for the year was established at the end of December, when spot oil was obtainable at 5.30c. per pound.

In January the consuming demand was very dull and the market was more or less of a professional affair. Speculative contracts for long oil did not look over encouraging for the nearby months and holders desirous of maintaining their position were constantly switching into the distant futures. Fluctuations in the market were narrow, the range for spot oil being confined within the limits of 7.20@7⅜c. a pound. Lard and tallow had both declined at the end of the month and the feeling in oil became bearish. Refiners were practically out of the crude market and prices at primary points became heavy, quotations declining from 46½c. a gallon to 45c.

February brought no material improvement in the consuming inquiry, but professional traders, realizing that prices went down easier than up, employed pressure and were rewarded with success. The decline in February extended from 7.15 to 6¾c. for spot refined oil. Crude oil reacted from 44c. to 41½c. and rallied at the close to 44c.

Buyers took more kindly to prices prevailing at the beginning of March and considerable business was placed for the soap trade. Exporters also bought freely and the market responded to the increased inquiry. The upward demonstration, however, proved merely of temporary existence. Speculative operators who had been testing the underlying conditions of the market earlier in the year concentrated their "big guns" on the July option and for a brief period about all the trading was confined to the July delivery. The speculative pressure was too much for the market to withstand and gradually prices weakened, spot oil declining from 6¾c. to 6¼c. Late in March estimates placed available stocks of oil at 550,000 barrels. Crude oil during the month moved in sympathy with refined, values falling off from 42c. to 39c. a gallon.

A firmer tone developed in April and a 6¼c. level was maintained throughout the month. Stress sales in crude oil caused considerable depression in the primary market and sales were effected as low as 37¼c. The crushing season had proved disastrous to the mills and many had lost money on their operations. As high as $40 per ton had been paid for seed early in the season and prices had only declined moderately to date. It was stated at this time that 4,000,000 tons of seed had been crushed at an average loss of $3 per ton. Toward the close of April over 75 per cent. of the crude oil mills in the Southeast had closed down.

Firmer prices for pure lard in May had a stimulating influence on the inquiry of oil, and business expanded. Foreign consumers also came into the market and purchased 30,000 barrels of oil for nearby shipment. As the month advanced, the cotton market became stronger and this added to the strengthening influence governing the oil situation. Supplies of crude oil were practically exhausted by the end of the month and the general feeling became quite bullish. The range of spot refined oil prices for the month extended from 6⅛c. to 6.90c. Crude oil advanced from 38c. to 43c. per gallon.

At the end of May, the first government cotton crop report was published and the figures set forth took about all the "steam" out of the refined market. The month of June therefore started under unfavorable conditions. The second week in June was taken up by the Interstate Cottonseed Crushers' convention in this city and trading was very slack during that time. Late in the month refiners were free sellers, and there appeared to be a concentrated effort to shake out the speculative long accounts. At the close of the month the consuming demand was very slow, and the market became weak on fear of heavy tenders against July contracts. The price movement in June for spot refined oil was from 6½c. to 6¼c. Crude oil declined from 41c. to 38c. per gallon.

The downward movement became more defined in July operators achieving more success, owing to heavy tenders on contracts. Another bearish cotton crop report was published and indications pointed to at least a 15,000,000 bale yield. Considerable selling of refined oil came from the south at this time, and it eventually panned out that several of the mills had been carrying sizable quantities of refined oil with the hope of marketing it at fancy prices. At the close of the month sales of crude oil for September delivery were reported in Texas at 32c. a gallon. Sentiment was exceedingly bearish and all classes of operators seemed to be working for a decline. The downward movement in July carried spot oil prices from 6¼c. to 5½c. Crude oil declined from 39c. to 30c. per gallon. This latter price was the low level for the year's crude oil market.

Speculative selling was still a feature early in August. At this time it looked as though 300,000 barrels were going to be carried over into the new crop season. The prevailing low levels, however, proved attractive to all classes or oil consumers and a heavy demand developed, both for home and foreign accounts. Under the increased demand prices hardened and the feeling which had been so obviously bearish the month before turned decidedly bullish. Lard and cotton also developed a firmer tone, and the speculative shorts bid the market up on themselves in their anxiety to cover. The first sales of new seed were made during this month in Texas at $14 per ton. The month's advance carried spot refined oil prices from 5½c. to 6¼c. The movement of crude oil prices was from 31c. to 36c. per gallon.

September opened with decided improvement noted in trade conditions. The heavy carry-over which many had expected failed to materialize and there was an actual scarcity of spot oil. The government cotton crop report published early in the month showed a remarkable shrinkage in the condition of cotton, and the yield as set forth indicated only 12,500,000 bales. This estimate was taken as a joke, and the trade paid no attention to the figures. Soap makers, sardine packers and compound manufacturers were active buyers of nearby oil, and it was reported that several compound lard plants had closed down, owing to their inability to secure immediate shipments of refined oil. The improved demand prevailing throughout this month carried refined oil prices on spot to 7½c., which was the highest price recorded for the year. Crude oil prices advanced to 40c. a gallon.

Seed moved more freely from plantations early in October, and the crude oil market became easier. Consumers expecting lower prices, owing to an increased supply, reserved their operations, and the market displayed a declining tendency. The lard market broke from 9c. to 8¾c. at this time, and the feeling in oil-consuming circles became very conservative. It was now evident that a 15,000,000-bale cotton crop was assured, and the bearish element in oil were free sellers of all the future shipments. As the month progressed the crude oil mills withdrew their offerings for forward delivery and only immediate shipments were obtainable. The farmers, through their different organizations, decided to advance the price of seed, and the market was established at $16@18 per ton. At the end of the month a squeeze in October prices took place and considerable excitement occurred when a local commission house placed an order for 3,000 barrels of spot oil, causing the market to advance from 6.10c. to 6.40c. per pound. At this time estimates placed export purchases for the season at 450,000 barrels. Domestic sardine packers had taken 40,000 barrels. The price range for refined spot oil in October was from 5.85c. to 6½c. Crude oil quotations were confined within the limits of 31½c. and 33½c. a gallon.

The mills continued to limit their crude oil offerings to immediate shipments of November and the market throughout the month was maintained with a steady degree of regularity. Seed scored a further advance, sales in many sections being recorded at $20 per ton. The demand for spot oil during the early part of the month was active, but later the movement from primary points became freer and prices declined under the pressure of resales. The packers were moderate buyers, but there appeared to be little important consuming demand from other sources. In the South there was a marked scarcity of tank cars and in the North difficulty was experienced in securing sufficient tight cooperage. Export buying was fair for the nearby months, and the movement on existing contracts was quite satisfactory. November quotations for refined spot oil were 5½@5⅞c. Crude oil ranged from 32c. to 33½c. a gallon.

Freer offerings of crude oil had a depressing influence on the market in December and the tone became distinctly bearish. Farmers who had held up the seed market found seed de-

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BOSTON PHILADELPHIA CHICAGO

CHARLOTTE, N.C. MONTREAL, CANADA

ANILINE COLORS

Coal Tar Products Oil of Myrbane

Chloride of Zinc, 98-99%

Aniline Salt Pyrogallic Acid Aniline Oil

teriorating on their hands and offerings became larger in all sections. Toward the close of the year lard, tallow, greases and vegetable oils all became weaker and cotton oil gradually yielded under these depressing influences. The consuming demand was slow and the main support of prices was vested in the market short interest. The poor quality of seed made itself fully realized at the close of the year and the refining loss was said to average 10 per cent., against 8 per cent. in 1910. Crude oil was offered as far ahead as February, sales for that month being reported at 31c. per gallon. Refined spot oil prices declined during the month from 5.38c. to 5.30c. per pound. The latter price being the lowest recorded for the year. Crude oil ruled comparatively steady at 30½@31c. per gallon.

Following are the high and low prices on spot for prime summer yellow oil in New York, for each month since January, 1906. The prices are based upon the closing quotations each successive week:—

	1911.		1910.		1909.	
	H.	L.	H.	L.	H.	L.
January	7⅜	7¼	7⅝	7.20	43	40½
February	7.15	6¾	7⅜	6.95	5.65	5.38*
March	6⅝	6¼	7¾	7⅜	5.85	5.33
April	6⅝	6½	7⅞	7⅜	5.65	5.38
May	6½	6⅛	8⅛	7¼	5.90	5.63
June	6½	6¼	8½	7¾	5.82	5.60
July	6¼	5½	10	8	5.75	5.30
August	6¼	5½	12	9¼	5.55	5.40
September	7⅛	6.30	11	8½	6.35	5.75
October	6.45	5.85	8⅝	7¼	7½	6¼
November	5⅞	5½	7⅞	7½	7.15	6⅝
December	5.38	5.30	7½	6⅞	7¾	7⅛
Year	7½	5.30	12	6⅞	7¾	5.30

	1908.		1907.		1906.	
	H.	L.	H.	L.	H.	L.
January	42¼	37½	48	40½	34	30¾
February	40	37	49¼	43½	32½	30¾
March	40½	37¼	49	45½	34½	31
April	43½	42	47	46	37½	33½
May	48½	43½	60	48¾	30½	27½
June	48	47	60	56½	38	36
July	47¼	42	59½	55½	38¼	35¾
August	42¾	37	57	55	38½	36½
September	40	37¼	56	53½	38	36½
October	39¼	37¼	53	54	53	37½
November	39¼	38¼	40	32½	42	40
December	38¾	38½	39	37	43½	41
Year	48½	37	60	32½	53	27½

* Changed from gallons to pounds in February, 1909, by trading rules of the Produce Exchange.

PRICES OF IMMEDIATE SHIPMENTS OF CRUDE COTTONSEED OIL, IN GALLONS FOR THE YEARS 1910 AND 1911.

	1910.		1911.	
	H.	L.	H.	L.
January	49	45	46½	45
February	48	44½	44	41½
March	50	47½	42	39
April	53	51	40	37¼
May	55	52	43	38
June	55	54	41	38
July	Nominal		39	30
August	Nominal		36	30
September	61	50	40	32½
October	51	45½	33½	31½
November	47	45	33½	32
December	48	44	31	30½
Year	61	44	46½	30

ROTTERDAM COTTONSEED OIL CAKE AND MEAL MARKETS.

In spite of the fact that owing to the relatively low prices for lard there was a small demand for compound lard, cotton oil maintained its high level of prices during the early months of the year, thus proving the extraordinary strength of the situation. On account of the high prices of the preceding year manufacturers had not closed any large contracts for forward delivery, so that they were continually in the market, although not for such large quantities as under normal market conditions. At the same time other oils, such as f. i. linseed oil, still remained high in price, which caused choice butter oil to stay for a longer period above 40 florins. Only when the reports about the prospects for the new crop assumed a more tangible form prices gave way a little (in May, 39@38 florins).

When these reports, however, pointed to a record crop (June-July), this, while of little influence on spot oil (old crop), caused prices for new crop oil to recede gradually and deals were closed, first at 35@35½ florins and later on down to 32@32½ florins. This reduced level of prices induced churners to again go in for larger quantities.

The demand for other purposes increased also and the reduced prices for oil, combined with the gradually rising lard prices, favored a more lively trade in compound lard and everybody expected a continuance of the higher lard prices. In August something unexpected took place, viz., that in spite of a surplus of about 200,000 to 250,000 barrels of the preceding crop and a bumper crop in view, prices advanced again.

Spot oil remained high and was purchased up until November at 39@40 florins. During November and December conditions changed and prices sold off to 37 florins, and later on to 35@36 florins.

New crop oil, as already said, advanced in August to 36@37 florins, but subsequently, in accordance with the position of lard and other oils, gradually declined to 34 florins and later on to 32½@33 florins (end of November-December), on which level the article maintained itself in spite of the fact that the government of the United States of America had meanwhile issued an official estimate for the current cotton crop of 14,885,000 bales, which would indicate a production of nearly 3,500,000 barrels of cotton oil or 725,000 barrels more than the preceding season. On the other hand, the fact must not be lost sight of that in 1908 about 1,000,000 barrels of cotton oil were exported, while the United States of America then consumed 2,000,000 barrels, that the population of the United States since has increased considerably and that also the uses of cotton oil had become more by many fold. Under these circumstances and considering the present position and outlook of lard and other oils and edible fats an enormous consumption of cotton oil is to be expected this season, if prices remain on the present level or perhaps still give way somewhat.

As for cottonseed meal and cake, practically no business of any significance has been done in this country on account of the high level of prices throughout the year.

COMPARATIVE TABLE OF PRICES FOR A FEW IMPORTANT ARTICLES.

	On December 31— 1911, florins.	1910, florins.	1909, florins.
Finest oleo oil	68@—	58@57	86@85
Finest neutral lard	62@61	77@76	83@—
Finest cotton oil	35@34½	46@—	47@—
Refined cocoanut oil	53@52	52@51	57@—

	On December 31— 1908, florins.	1907, florins.
Finest oleo oil	76 @75	56@55
Finest neutral lard	66 @—	55@54
Finest cotton oil	32½@—	34@—
Refined cocoanut oil	44 @43	44@43

All in guilders per 100 kilos, delivered Rotterdam, including barrels.

LIVERPOOL OIL AND CAKE MARKET.

Many people will not be sorry to see the end of the year 1911, which has been disfigured by weird politics and industrial strife, culminating in a series of "sympathetic" strikes and concerted attempts to disorganize and paralyze the trade of the country. Markets have been considerably disturbed by unusual happenings, thus rendering almost futile any serious attempt to compile an intelligible report upon the movements of the past twelve months; nor, under the circumstances, could any such resume prove of much profit to the reader, or form any reliable guide for the future. However, the following table of values, based upon price sterling per ton of 2,240 pounds and Liverpool quay or store terms, less usual trade discounts, will give some idea as to fluctuations in markets, and it will be noticed that linseed oil again claims distinction for the largest difference between highest and lowest, viz., over £16 per ton, Lagos palm oil gaining second position with nearly £8 per ton.

	Linseed oil. £ s. d.	English cotton oil. £ s. d.	Soya oil. £ s. d.
January	43 15 0	32 0 0	33 10 0
	48 10 0	33 0 0	34 0 0
February	45 10 0	33 0 0	34 0 0
	52 10 0	33 17 6	35 0 0
March	50 10 0	33 7 6	34 0 0
	50 10 0	32 10 0	32 0 0
April	49 5 0	31 0 0	31 0 0
	49 10 0	30 15 0	30 15 0
May	48 15 0	29 15 0	29 17 6
	48 0 0	30 5 0	30 5 0
June	47 0 0	30 0 0	30 5 0
	47 0 0	30 0 0	30 5 0
July	44 10 0	29 12 6	30 10 0
	44 10 0	29 10 0	30 10 0
August	44 10 0	29 10 0	29 10 0
	43 0 0	29 0 0	29 10 0
September	44 0 0	30 0 0	31 0 0
	44 15 0	31 10 0	32 10 0
October	43 10 0	29 17 6	31 0 0
	42 0 0	31 10 0	31 15 0
November	42 0 0	32 0 0	32 10 0
	36 0 0	31 5 0	32 0 0
December	36 0 0	30 0 0	32 0 0
	38 10 0	27 7 6	30 0 0

	Average price home-melt tallow. £ s. d.	Lagos palm oil. £ s. d.
January	37 0 0	35 2 6
	36 15 0	37 0 0
February	37 0 0	37 0 0
	36 0 0	34 15 0
March	36 0 0	32 12 6
	32 15 0	30 2 6
April	32 0 0	29 15 0
	32 15 0	30 12 6
May	32 15 0	30 12 6
	32 10 0	28 15 0
June	31 15 0	28 15 0
	31 15 0	28 17 6
July	31 10 0	30 7 6
	30 0 0	30 10 0
August	31 0 0	30 0 0
	32 0 0	30 0 0
September	34 15 0	33 0 0
	36 0 0	34 2 6
October	35 0 0	33 7 6
	35 10 0	33 2 6
November	35 15 0	33 0 0
	34 15 0	31 7 6
December	34 5 0	30 12 6
	33 15 0	30 0 0

	American linseed cake. £ s. d.	American cotton cake. £ s. d.
January	8 10 0	7 15 0
	8 11 3	7 15 0
February	8 10 0	7 15 0
	8 8 9	7 15 0
March	8 8 9	7 15 0
	8 7 6	7 7 6
April	8 7 6	7 7 6
	8 3 9	7 7 6
May	8 3 9	7 7 6
	8 3 9	7 10 0
June	8 3 9	7 10 0
	8 3 9	7 10 0
July	8 12 6	7 10 0
	8 15 0	7 10 0
August	8 17 6	7 13 9
	8 17 6	7 15 0
September	9 2 6	7 15 0
	9 11 3	7 18 9
October	9 11 3	8 0 0
	9 11 3	8 0 0
November	9 12 6	8 2 9
	9 13 9	8 2 6
December	9 13 9	8 2 6

The year 1912 opens with serious misgivings as to what may occur before its finish. Already, on this side, a large cotton strike is in actual progress. There are threats of a "national" stoppage of coal mines, while the transport workers talk of combined action to bring all business throughout the country to a standstill. But, on the other hand, and although "union" leaders have to cause some kind of agitation in order to retain their position and secure their emoluments, it is probable that the British workman will be sensible enough to realize that any such programme as suggested by irresponsible spokesmen will, in the end, act quite as disastrously upon the strikers as upon anyone else, and therefore it is more than probable that all this revolutionary talk will end in smoke. Calm consideration would indicate that prospects for 1912 are not "half bad": The present volume of trade is on a full scale, and there is no solid reason to anticipate any early or material shrinkage, but rather, and provided there are no serious labor troubles, there are good grounds for hoping that 1912 will prove an excellent year generally, and well in advance of its predecessor.

LONDON COTTONSEED OIL MARKET.

The large American cotton crop, with its consequential heavy oil production, gave American makers the opportunity of successfully competing for the European market against the domestic crushers. In the first part of the year there was very little American oil, and under the influence of a "bull" ring prices of crude opened high and remained fairly steady, but later, on the American conditions becoming apparent, values fell away. British producers have in the circumstances indicated found great difficulty in obtaining an output for their product. Spot prices for the chief grades have moved according to the following schedule prepared from an analysis of weekly closing prices:—

COTTON OIL.

	Crude. £ s. d.	Crude. £ s. d.	Refined ordinary pale. £ s. d.	Refined ordinary pale. £ s. d.
January	29 0 0	@29 10 0	30 10 0	@31 0 0
February	29 5 0	@30 0 0	31 10 0	@—
March	27 15 0	@29 10 0	29 10 0	@31 10 0
April	26 10 0	@27 5 0	28 0 0	@29 10 0
May	25 5 0	@26 10 0	27 10 0	@28 0 0
June	25 0 0	@25 10 0	27 5 0	@27 10 0
July	25 15 0	@26 5 0	27 5 0	@27 15 0
August	25 7 6	@26 15 0	26 15 0	@28 15 0
September	27 5 0	@27 15 0	28 5 0	@30 0 0
October	25 15 0	@27 0 0	27 15 0	@29 10 0
November	24 15 0	@26 15 0	26 15 0	@29 0 0
December	22 5 0	@24 5 0	25 0 0	@26 10 0

LONDON COTTONSEED CAKE AND MEAL MARKET.

The prolonged drought, which a great part of Europe, including the United Kingdom, experienced during the summer, had its effects on the cake market, business in which especially during the latter half of the year, was good. Prices are indicated by the following prices of quotations towards the end of the first week in each month:—

LONDON COTTONSEED CAKE PRICES.

LONDON MADE.

	1910 £ s. d.	1910 £ s. d.	1911 £ s. d.	1911 £ s. d.
January	5 17 6	@6 0 0	4 17 6	@5 0 0
February	6 0 0	@6 2 6	4 15 0	@4 17 6
March	6 15 0	@6 17 6	4 10 0	@4 12 6
April	6 17 6	@7 0 0	4 12 6	@4 15 0
May	6 12 6	@6 15 0	4 10 0	@4 12 6
June	6 7 6	@6 10 0	4 12 6	@4 17 6
July	6 0 0	@6 2 6	4 15 0	@4 17 6
August	6 7 6	@6 10 0	4 17 6	@5 0 0
September		—@—	5 10 0	@5 15 0
October	6 5 0	@—	6 0 0	@6 2 6
November	5 10 0	@5 12 6	5 15 0	@6 0 0
December	5 2 6	@5 5 0	5 17 6	@6 0 0
Close	4 17 6	@5 0 0	5 17 6	@6 0 0

EGYPTIANS.

	1910 £ s. d.	1910 £ s. d.	1911 £ s. d.	1911 £ s. d.
January	5 16 3	@5 17 6	4 16 3	@4 17 6
February	5 18 9	@6 0 0	4 15 0	@4 17 6
March	6 10 0	@6 12 6	4 8 9	@4 10 0
April	6 6 3	@6 7 6	4 12 6	@4 15 0
May	6 0 0	@6 2 6	4 10 0	@4 12 6
June	5 17 6	@6 0 0	4 10 0	@4 12 6
July	5 7 6	@5 10 0	4 8 9	@4 10 0
August	6 0 0	@6 2 6	4 15 0	@4 17 6
September	6 2 6	@—	5 17 6	@6 0 0
October	5 17 6	@—	5 17 6	@6 0 0
November	5 2 6	@5 5 0	5 17 6	@6 0 0
December	5 0 0	@5 2 6	5 16 3	@5 17 6
Close	4 16 3	@4 17 6	5 13 9	@5 16 3

TRIESTE COTTONSEED OIL MARKET.

The importation of cottonseed oil in Austria-Hungary has almost been stopped since March, 1906, when the new Austrian custom tariff had enhanced the duty on this oil to 40 kr. per 100 kilos gross, equal to about 50 francs per 100 kilos net. Consequently the port of Trieste, which up to that date had been one of the most improtant for this item, has become now a port of a very limited importance and simply for the transit business of cottonseed oil from New York and the Gulf to Italian ports of the Adriatic and to ports of the Levant.

For these reasons the cottonseed oil trade of our market has been limited only to transit transactions for some time past and also these have been now reduced by the fact that our merchants—as they cannot use themselves this oil at all—have diverted their attention to other oils and especially to those of sesame seeds, which are crushed in the interior of the dual monarchy and particularly at Trieste itself.

Also the consumption and more precisely the taste of the consumer has changed very much during this last period and whereas formerly the consumer preferred the excellent cottonseed oil to which ever other oil, he has got accustomed now little by little to sesamum oils, though their flavor is much worse and particularly with regard to inferior qualities.

Owing to these conditions it is barely possible to speak of a cottonseed oil trade on our market for the year 1911; our merchants have bought, speculating about 10,000 to 15,000 barrels of oil for the new campaign and we can say that the fourth part of it has arrived here hitherto, but it has to be emphasized that not a single barrel will be imported neither in Austria nor in Hungary for the above reasons explained, while during 1905, the year previous to the increase of duty, Trieste itself had imported 23,087,800 kilos of cottonseed oil, worth about two millions and a half of dollars.

At present negotiations are going on between the government of Austria-Hungary and that of Washington regarding a reduction of the duty and if the rate agreed upon will permit the importation of cottonseed oil into the dual monarchy, our market will certainly regain its former importance.

The oil consumption of this country is limited now to sesamum, arachides, rapeseed and linseed oils manufactured in Austria-Hungary, besides olive oil imported from Italy, Turkey, Greece, Spain and other countries, which oil is paying, however, a duty of only 4 kr. per 100 kilos gross, equal to 5 francs per 100 kilos net.

The trade in oil cake on this market is very limited and hardly of any importance for the foreign exporters. The mills of this country itself yield a considerable quantity of sesame arachides and linseed cakes, which is exceeding the consumption of the monarchy and, therefore, crushers are compelled to look for another outlet and generally our Italian neighbors absorb this stuff.

NEW YORK LARD, TALLOW, STEARINE AND GREASE MARKETS.

Lard.

Conditions prevailing in the local market were not of a character to create bullish enthusiasm and trading throughout the year was conducted on a conservative basis, both for prompt and forward requirements. A scarcity of available offerings in January caused a firm opening at 10½c. for prime city on spot, which proved to be the highest point established during 1911. As the year advanced production increased and accumulations materialized both here and in the West. This had a depressing influence on prices and the market gradually yielded under the weight. Fluctuations in the corn market were also of bearish significance and the quotations for hogs were adjusted accordingly. The downward movement carried spot lard prices from 10½c. to 7¾c. before it subsided. The latter price was established in May. At this time an improvement developed for export account and the undertone of the market became firmer. Prices were slow to respond, however, and it was not until late in July that any real strength was displayed. August witnessed a further advance, while in September values had moved as high as 9¾c. for spot. The constant increase in available supplies made itself manifested from that time on until the close of the year, but the downward movement of prices was not along very pronounced lines. In October sales on spot were recorded at 8¾c., and in November at 8¼c. The close was quiet, with 9c. the prevailing spot price.

Tallow.

The movement of tallow prices was irregular and in close proximity to that of lard and cottonseed oil. The state of industrial activity and the conservative feeling of consumers were influences fully reflected in the character of the year's transactions. Taking "city" as a demonstration, the market opened the year at 7½c. per pound. From this price the movement was gradually downward until a 5¾c. level was established in May. Individual sales on the decline seldom exceeded 100 hhds., and regular contract channels were therefore required to absorb most of the output. The low lever prevailed all through the month of June, but in July 6c. was asked and paid. In August and September there was a pronounced scarcity of spot offerings owing to restricted production and a steady call for contract deliveries; this tended to stiffen prices sharply. Early in September sales were reported at 7¼c. The advent of cooler weather brought freer stocks to market and values slowly but persistently declined. There was no interruption to the downward movement during the remainder of the year and at the close of December sales were reported at 6¼c.

The following table shows the lowest regular price each month during the past five years for fair grade "country," and the highest for soapmakers' finest

Smith, Kline & French Co.

PHILADELPHIA

Wholesale Druggists, Manufacturers and Importers

Proprietors of Eskay's Food, Eskay's Neurophosphates and Acorn Salve.
Manufacturers of a full line of Pharmaceuticals, Tablets, Chemicals, Perfumes and Toilet Preparations
Originators of Concentrated Nitrous Ether in tubes

OFFER

Japanese Camphor	Bismuth and Iodine Salts	Manna, small flake
Genuine Bermuda Arrowroot	Cascara Sagrada Bark	Bayberry Wax, resifted
Balsam Peru	Insect Flowers, powdered	Paris Green
Insect Flowers, open	Insect Stems, powdered	Spikenard Root
Juniper Berries	Corigliano Licorice	Sanitary Fluid
Cocoa Butter	Gum Asafetida	Cardamom Seed, decorticated
Cake Meal	Gum Guaiac, strained	Caraway Seed
Camphor, Monobromated	Gum, Mastic	Mogodor Foenugreek Seed
Catechu	Alexandria Senna, half leaf, garbled	Parsley Seed
Domestic Sunflower Seed	Powd. Carbonate of Magnesia	Celery Seed

BLACKS

OF EVERY KIND FOR
EVERY KNOWN PURPOSE

Carbon Gas Black
Lamp Black
Ivory Black
Bone Black
Drop Black
Frankfort Black
Vine Black
Charcoal
Mineral Black
Photogravure
Plate Blacks
Etc., Etc.

"We set a high standard or our Blacks and keep them strictly to that standard. As you find them today, so you will always find them, unsurpassed."

BINNEY & SMITH COMPANY

81-83 Fulton Street, New York

sorts, all in barrels or tierces, the latter in prime shipping order and sold at an f. o. b. rate.

	1911.		1910.		1909.		1908.		1907.	
	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.
Jan.....	7⅞	8¾	6½	7½	6	7	5⅝	6½	6⅛	7½
Feb.....	7¼	7⅝	6⅝	7¼	6	6⅞	5⅝	6½	6½	7⅝
March....	6¾	7	7	7⅝	5⅝	6⅝	5⅛	6½	6⅝	7⅝
April....	6⅛	6⅝	7⅜	8	5½	6⅛	5¼	6¼	6¾	7½
May.....	6	6¾	7	7¾	5⅝	6½	5⅝	6¼	6	7¼
June.....	5¾	6⅜	6⅝	7⅜	5½	6½	5½	6½	6¼	7¼
July.....	5¾	6⅝	6⅜	7¼	5½	6½	5½	6½	6¼	7¼
Aug.....	5⅞	7¼	7½	8⅛	5⅜	6¼	5⅝	6⅜	6¼	7½
Sept.....	6¾	7¾	7⅝	8½	5⅞	6⅞	5⅝	7	6¼	7½
Oct.....	6⅝	7½	7½	8½	6¼	7⅛	5⅝	7	6¼	7½
Nov.....	6¾	7½	7½	8⅝	6⅜	7¼	5⅝	6¾	5¼	7¼
Dec.....	6⅞	6⅞	7⅜	8	6⅜	7½	5½	6⅝	5¼	7
Year.....	5¾	8¼	6½	8⅝	5⅜	7½	5⅛	7	5¼	7⅝

Stearines.

The year was characterized by spasmodic fluctuations in oleo stearine and the market pursued a decidedly irregular course. The highly speculative character of the item is well known in trade circles and the spasmodic fluctuations therefore created no unusual surprise. During the first six months of the year the consuming demand was comparatively quiet, owing to the low prices of pure lard and the resultant inactivity in lard compound, in which oleo stearine is an important constituent. The course of prices from January until May was downward and extended from 9¼c. to 7¼c. per pound. During May, June and July quotations ruled steady at 7⅜@8½c. In August the market started on one of its characteristic "rampages," and values advanced sharply to 9½c. September witnessed an advance to 12c., which marked the culminating point of the upward demonstration. From September 15 until the end of the year the course of prices was downward, with scarcely any interruption. The last sales were recorded at 8⅞c. Lard stearine never assumed a very prominent place in the local market. Trading at best was moderate, and a goodly portion of the time prices were in a nominal condition. The year's price range extended from 9c. to 12c., the high point being recorded in January and the low in May. At the close 10¼@10½c. was the prevailing quotations.

Greases.

Labor difficulties in the textile industry and unfavorable conditions prevailing in the leather trade early in the year had a restricting influence on the consumption of greases. Soapmakers bought rather freely during the winter and spring months, but later in the year the declining tendency of cottonseed oil diverted attention to the latter commodity. The highest prices were established in January, when sales were effected at 6½c. minimum for brown grades, but the movement from that time until the close of the year was gradually downward. In December sales of prime brown were made on the basis of 5c. Prices of all the different descriptions moved in sympathy with brown. At the opening of the year white was held at 7¾@8¼c., yellow at 6¾@7¼c., and house 6¾@7¼c. At the close white commanded 6@6¾c., yellow 5½@6c., and house 5½@6c. Leading distributors were of the opinion that the year's consumption was a shade under that for 1910.

CHICAGO, LARD, TALLOW, STEARINE AND GREASE MARKETS.

Lard trade at Chicago during 1911 was minus many of the spectacular features of that of the previous year, but this was chiefly due to the fact that the production was more closely adjusted to the known requirements of the consumption, and for that reason the trade was both more voluminous and more satisfactory than in recent years.

There were no big speculative deals engineered and prices were allowed to reflect closely the relationship of the supply to the demand. As a consequence of the greatly increased production and by virtue of this absence of extensive manipulation, the general average value of the year was lower than that of recent years.

This brought about immediate and satisfactory results, as the extensive use of cheaper substitutes for lard here and abroad was greatly minimized, and shipments of lard to foreign shores made a greater total than in recent years, exceeding exports of 1910 by a big margin.

Highest prices of the year were recorded in January and were an inheritance of the previous year's record-smashing values. Lowest prices were made in April and obtained during the greater part of May. At the zenith for 1911, lard sold at $10.67½, against $14.65 in March, 1910, when values were highest for that year.

April, 1911, found prime steam lard at Chicago down to $7.70, the lowest price recorded since March, 1908, and contrasted to a low price of $9.70 in 1910.

Although much larger than in the previous year, the production of lard during 1911 did not reflect in full the total increase in the production of hogs for the year. This was due to the fact that many of the hogs, in fact a larger proportion than usual, were of inferior quality and lacked the lard producing qualities of swine marketed in former years.

A cholera scare started in the fall of the year, when pigs of the preceding spring were just rounding out into matured porkers, led many of the largest hog producers of the corn belt to curtail feeding operations and intimidated others to such an extent that they marketed all their pigs in an immatured condition. This resulted in a flood of light, thin hogs at market points, prices broke sharply and the future supply of fat hogs, suitable for lard production, was threatened.

Speculation engendered by this possibility of a deficit in the future fat hog supply soon sent values of lard climbing upwards, and the close of the year found prices ranging up to $9 and better, or $1.30 to $1.60 higher than at the low time of the year and closer to values a year back than at any previous time of the period.

As prices declined during the first quarter of the year, warehousemen were quick to anticipate an expanding consumptive demand for lard, and they purchased more freely than in former years. The result was much heavier stocks in storage houses than are usually carried, and the close of the year found holdings at Chicago aggregating 66,195 tierces, as contrasted to 28,016 tierces at the close of 1910, 17,858 tierces at the end of 1909, and 50,552 tierces at the close of 1908.

World's stocks of lard at the opening of 1912 were 226,719 tierces, the largest in many years, and compared to stocks of 124,934 tierces January 1, 1911; 110,966 tierces January 1, 1910, and 221,241 tierces January 1, 1909. Of the world's total, 131,500 tierces were in Europe or afloat for Europe, while 95,219 tierces were held at domestic centers. These totals showed increases of 49,650 tierces and 52,135 tierces, respectively, as compared to stocks held a year ago.

CASH PRICES FOR TWO YEARS.

The following table exhibits the opening, highest, lowest and closing cash prices, on the regular market of lard in store (monthly) for 1911, and the highest and lowest prices for 1910:—

	1911				1910	
	Open.	High.	Low.	Close.	High.	Low.
Jan..	10.42½	10.67½	9.82½	9.82½	12.90	11.70
Feb..	9.75	9.87½	9.00	9.02½	13.20	11.97½
Mar..	9.05	9.15	8.25	8.25	14.65	13.35
April.	8.15	8.17½	7.70	7.92½	14.00	12.90
May..	7.92½	8.20	7.92½	8.00	13.25	12.30
June.	8.10	8.30	8.00	8.20	12.47½	11.85
July..	8.27½	8.60	8.12½	8.47½	12.27½	11.55
Aug..	8.52½	9.40	8.52½	9.32½	12.12½	11.50
Sept..	9.47½	9.57½	8.97½	8.97½	12.85	11.95
Oct...	9.60	9.10	8.72½	8.80	13.10	12.55
Nov..	9.00	9.22½	8.97½	9.07½	11.87½	9.70
Dec..	9.00	9.17½	8.80	9.15	10.92½	9.77½

STEARINES.—Prices of stearines followed the trend of lard values and averaged lower than during the previous year. They covered a fairly wide range, however, selling down to 7¼@7⅜c. in March and advancing up to 12½c. in September. Prime oleo stearines sold around 8@9c. most of the period, however, and these prices were low enough to encourage unrestricted consumption. The year's trade was broad and active and the market finished 1911 in a healthy condition, with prices quoted around 9@9½c.

OILS.—Oleo oils were in much more liberal supply during 1911 and the volume of business was proportionately increased. Prices opened on a high level, but gradually declined as the increased production made its weight felt on the market, and the general average for the year was lower than that of 1910. Extra oleo oil opened the year at around 10c. a pound and in April sold down to 7½@7⅝c. From that level it started an upward climb which landed it at 12½c. in September. Slight recessions followed, but sales during the last quarter of the year were largely at 11@11¾c., and the close was with the market firmly established at 11¼@11½c. and giving promise of going higher.

TALLOWS.—Trade in tallows during the year 1911 was of good volume, without being particularly notable. Prices opened around 7@9c., according to quality, but quickly worked downward to 5@6c., at which level most of the spring and summer production was absorbed. Fall months saw values gradually firm up to 6½@7½c., and the close was with quotations established around 6¾@7c. for the best grades. Stocks were not permitted to accumulate to any extensive extent and little surplus tallow pressed on the market from one end of the year to the other.

GREASES.—Market for greases was highest at the opening of the year, when sales were made up to 6½@6⅝c., and lowest during the hot weather of the summer months, transactions at 4½@4⅞c. being recorded in July. As a whole the trade was of good character and the market finished the year in a healthy condition, with prices ranging up to 6c. and giving promise of going higher.

LONDON TALLOW MARKET.

The record prices of 1910 were not maintained in 1911. Although supplies from Australia, New Zealand and elsewhere were less than in the previous year, there was an absence of speculation and values receded until May, then remained practically unchanged until August, when there was a smart rise, mainly due to the desire to obtain control of tallow for consumption or speculation in view of the drought that had developed in Europe. The higher level of value thus obtained virtually ruled until November, when there was a falling away which, however, was arrested before the close of the year. The range of prices has been as follows:—

AUSTRALIAN MUTTON.

	Fair		Fine	
	s.	d. s. d.	s.	d. s. d.
January	36	0@36 6	37	6
February	36	6@35 0	37	6@36 6
March	35	0@34 0	36	0@35 6
April	33	6@34 0	35	0@36 3
May	33	6@32 6	36	9@36 0
June	32	6@33 6	36	0@36 3
July	33	6	36	0
August	33	0@34 0	35	6@36 0
September	35	0@37 0	37	9@40 6
October	36	0@36 6	39	0
November	36	6@35 6	39	0@37 6
December	34	6	37	0

BEEF.

	Fair		Fine	
	s.	d. s. d.	s.	d. s. d.
January	35	6	37	6@37 0
February	35	6@34 6	37	6@36 6
March	34	0@33 3	36	0@34 6
April	33	0	34	0@34 6
May	33	0@32 0	34	6@34 0
June	31	6@32 6	33	6@33 0
July	32	6@32 0	33	0
August	31	6@32 0	33	0@33 9
September	33	0@34 6	34	9@36 9
October	33	6@35 0	36	6
November	35	0@34 0	36	6@36 0
December	33	0@33 6	35	6@35 0

Estimated importations and consumption during the last five years are shown in the following tables:—

	1911, tons.	1910, tons.	1909, tons.	1908, tons.	1907, tons.
Stocks, London warehouses Jan. 1.....	2,000	2,300	4,000	3,000	2,000
Imported	70,000	76,200	56,000	51,000	50,000
Totals	72,000	78,500	60,000	54,000	52,000
Home consumption ..	13,000	13,500	8,000	7,000	8,000
Exportations..	56,000	63,000	49,700	43,000	41,000
Stocks, London Dec. 31.....	4,000	2,000	2,300	4,000	3,000
Totals	72,000	78,500	60,000	54,000	52,000

The source and destination of the goods is demonstrated in the following analysis in round figures of the imports and exports:—

IMPORTS.

From—	1911, tons.	1910, tons.	1909, tons.	1908, tons.	1907, tons.
South America and Falkland	8,950	10,800	7,500	12,700	7,000
North America	150	300	500	1,300	1,000
Australia	44,000	44,600	28,000	20,000	24,000
New Zealand.	16,000	19,500	10,000	16,000	16,000
Other districts	900	1,000	1,000	2,000	2,000

EXPORTS.

To—	1911, tons.	1910, tons.	1909, tons.	1908, tons.	1907, tons.
Russia	24,500	30,500	25,500	24,300	18,600
Germany	8,000	8,200	6,100	4,000	5,300
Holland	11,000	13,300	9,500	9,000	11,400
Belgium	5,000	4,300	2,900	19,000	1,800
Italy and Spain	2,700	2,700	3,300	2,100	2,700
Other countries	3,800	4,000	2,400	1,500	1,300

The quantity of home melt exported from London showed some recovery on the figures of the two previous years, thus:—

	Tons.		Tons.
1911.....	6,810	1908.....	8,155
1910.....	4,340	1907.....	8,245
1909.....	6,142		

OTHER VEGETABLE OILS.

Coconnut Oils.

COCHIN.

The year opened with Cochin quoted at 9¾@10c. per pound; but the downward course of lard at the time had a depressing effect on the market. Buyers were not plentiful and most trading during the early part of the year was on contract account.

Following the course of Ceylon, the Cochin market declined during the first quarter of the year. By the middle of April dealers were quoting it at 8c. per pound. The next three months witnessed an advance to 9½c. per pound, and during August and September no oil on spot was available. The last three months of the year witnessed a decline from 13c. per pound in October to 9½c. per pound in December.

When it was realized last summer that the continued drought all over Europe would create great scarcity of butter, a big demand was experienced for cocoanut oil, copra and palm kernel oil, and despite immense shipments from all producing countries prices advanced to the highest on record. Java copra touched £30 per ton and palm kernel £21 per ton, though the former later fell to £24 5s. and the latter to £17 15s.

Copra and palm kernel oil have become absolute necessities in many kinds of soap, and in the whole range of fats which are compounded for edible purposes. The limit of demand apparently has not been reached and each year the product of plantations sown to develop this industry is being marketed, which, added to the product of the wild growth, will naturally increase the production at the present tempting range of prices.

It would have been considered impossible, a few years ago to find a market for the large amounts of copra now being sold. Bigland, Sons & Jeffreys, British authorities, say:—We have no reliable statistics from the South Sea Islands, but when this quantity is added to the known shipments from other points the total for 1911 will amount very nearly to 600,000 tons, and if we add to this a possible 350,000 tons of palm kernels, we have a production of oil in Europe of 500,000 tons. Adding the weight of cocoanut oil imported, it would give us a total nearly equal to the weight of cottonseed oil produced in the United States, and at first sight it would seem impossible to contemplate a continuance of such quantities without anticipating a great fall in price. The position, however, is that, with the comparatively stationary number of milch cattle in America and Europe, the available supply of butter is so totally inadequate to supply the needs of millions of people who are ready to purchase articles equal to it as a food constituent that we do not wonder that the increased sale of margerine is every year able to take a largely increased quantity of these products, and with the increase of at least two million people in North America, Germany and the United Kingdom every year, with no increase in the supply of butter, this apparently difficult problem finds its solution.

We hesitate to make a forecast of actual prices during the coming year, but it appears to us to be unlikely that Ceylon cocoanut oil will go below £36 per ton; palm kernel oil, f. o. b. Hamburg, £34 per ton; Java copra, £24 per ton, and palm kernels, £17 per ton.

The figures to which these articles may advance will be governed by the price of lard next summer and the fluctuations in butter.

We once again recognize the inestimable value of the equatorial zone in supplying the necessities of life in the overcrowded centers of more advanced civilization.

PARTICULARS OF COPRA SHIPMENTS.

From—	1910. Tons.	1911. Tons.
Manila, Jan. 1 to Dec. 31...	118,200	136,118
Ceylon, Jan. 1 to Dec. 15...	34,750	33,637
Straits, Jan. 1 to Dec. 31...	102,946	97,254
Java and Dutch East Indies, Jan. 1 to Dec. 31.....	192,724	233,177

South Sea figures estimated 70,000 tons.

Imports of copra at Marseilles during the past five years follow:—

	Tons.		Tons.
1911.....	173,056	1908.....	163,999
1910.....	171,423	1907.....	109,744
1909.....	136,665		

CEYLON.

Prices for Ceylon at the opening of the Liverpool cable, January 4, was £39 10s. Save for a sharp advance the following week to £40, prices declined steadily so that by March 25 sales were made at £32 10s. per ton. At this time market conditions in all edible and fat products became very firm and the market again resumed its upward course. By May 10 Liverpool quoted £36 10s. and by the middle of July the quotation was £38 10s.. During August speculative activity coupled with a strong demand from soapmaking interests, caused sharp advances. Thus, August 2 oil was sold at £37 per ton, and August 30 at $42 10s. The upward tendency continued during the early part of September, the highest point of the year—and the highest prices on record—£44 per ton was reached. Soapmakers purchased the oil most sparingly and most of the imports were for edible purposes. Buyers naturally turned to substitutes, rather than pay exorbitant prices for Ceylon oil. Up to October 25 the strong situation continued in the primary markets, but from then on a decline was noted, and the significant feature of the decline was that the London quotation hovered between £38 10s. and £39 10s. for fully three months—a condition not experienced before in years.

Spot oil at all times was more or less at a premium, but particularly so after July.

Imports of cocoanut oil into the United States in the past three years were valued at $2,746,547 in 1909; $4,072,709 in 1910 and $3,925,641 in 1911.

The subjoined table gives the high and low prices for each month from January 1, 1907, to December 31, 1911, on Ceylon cocoanut oil, the figures being based on the closing quotations of each successive week:—

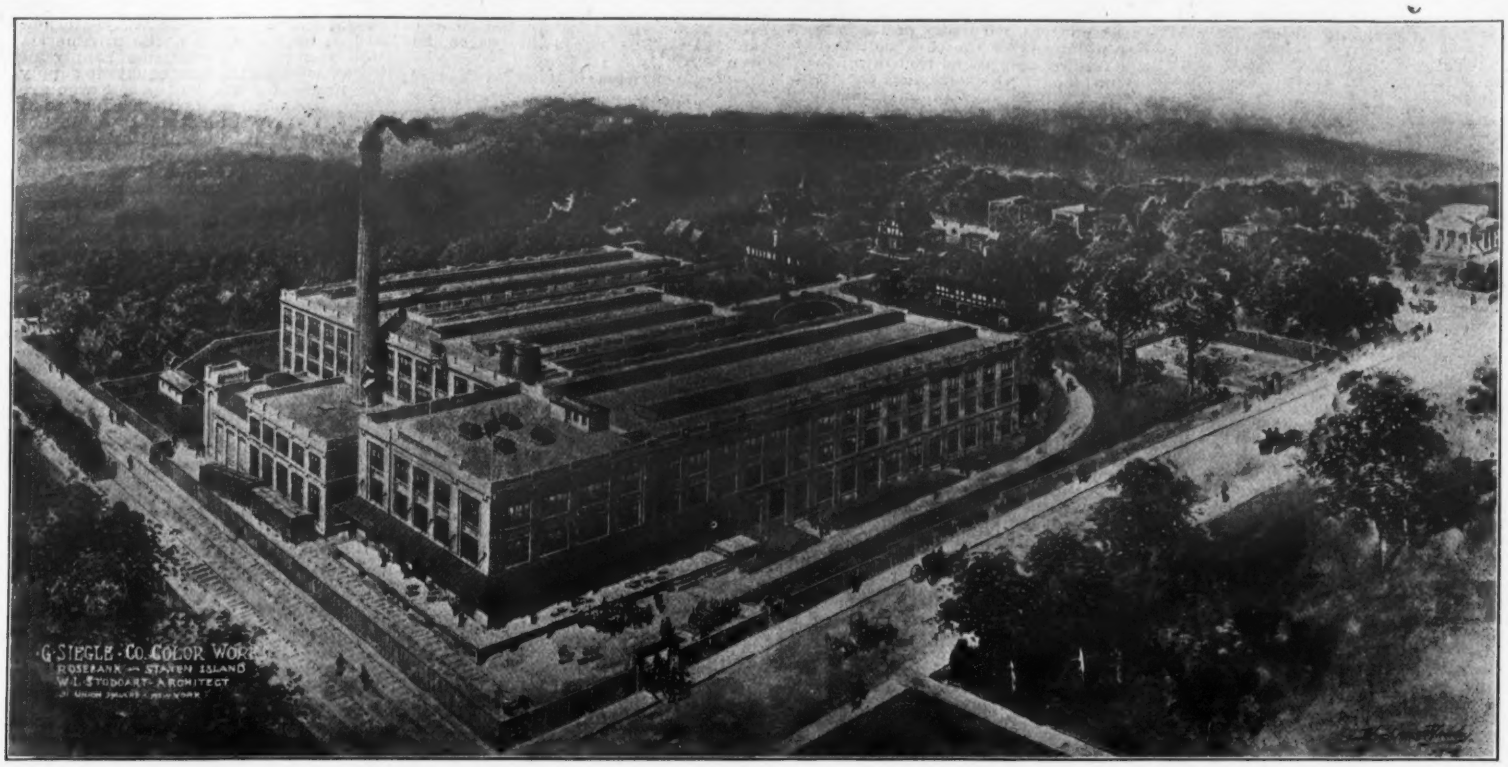
	1907. H.	L.	1908. H.	L.	1909. H.	L.	1910. H.	L.	1911. H.	L.
Jan....	9½	9¼	7	6¾	7	6¾	9½	9¼	9¼	9¼
Feb....	9⅜	9⅜	7	6⅞	7⅛	6⅞	9¼	8.90	9¼	9
March.	10	9⅜	7	6½	6⅝	6½	9¼	9	8	8
April...	9⅞	9¼	6¼	6½	6⅞	6⅜	9⅜	9⅝	8	7.70
May....	9⅞	9¼	7	6¼	7⅛	6⅜	9⅝	9½	8¼	8¼
June...	9⅝	9	6½	6¼	7¼	7⅛	9⅜	9¼	8¾	8½
July....	9½	9	6½	6¼	8	7¼	9¼	8⅞	9¾	9½
Aug....	9⅜	8⅝	6½	6⅛	7¾	7½	9½	9¼	..	..
Sept....	8½	7¾	6½	6¼	7¾	7½	10¼	9¾	..	..
Oct.....	8¼	8	7	6½	8	7⅜	10	9⅜	12	12
Nov....	8¼	7½	7	6½	8½	8¼	9¾	9¼	11¾	11
Dec....	7¼	6¾	7	6	9¼	9	9¼	9¼	9¼	8¾
Year...	9⅜	6¾	7	6	9¼	6⅜	10¼	8⅞	12	7.70

CORN OIL.

New uses for corn oil were an important factor in the usually busy year which has just closed. While the bulk of the oil was taken by foreign consumers, much oil was put into domestic consumption by paint making interests and considerable quantities were made use of by soapmaking interests. As a lubricant stock it enjoyed a demand which compares favorably with past years. It was also used largely by linoleum and oil cloth manufacturers and found a growing demand as an edible oil. In general its various uses gave corn oil an independent position among the vegetable oils. The influence of linseed and of soya bean oil, however, was apparent in a minor way throughout the year.

Western manufacturers found a ready market at all times for their oil and, as a result of this, production was heavy. And this factor is given as the reason for the fairly even rise and decline of prices.

The year opened with corn oil quoted at $6.85@6.70 per hundred pounds. Despite the high price a fair volume of business was done and the demand from abroad was good. This demand



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increased to such an extent that a shortage of spot oil was the condition by the middle of February. Prices rose steadily until the $7.15@7.20 point was reached. The competition of soya bean oil, which was to be had in small lots at the same figure, coupled with an increase in supplies, brought about an easier condition by March, when the quotations were $6.50@6.55. This still further declined to $6.10@6.15 during the following two months, and in June prices reached the low level of $5.60@5.65. The reduced prices immediately stimulated demand and prices again rose, reaching the $6.60@$6.65 figure by the middle of September. With the exception of a brief period of very active trading in November, the market became easier, and the year closed with trading dull and featureless, and prices at $5.75@5.80 per hundred pounds.

The following table gives the exports of corn oil from the United States during the past three years:—

	Pounds.	Value.
1909	21,202,348	$1,124,131
1910	14,170,708	853,648
1911	26,652,198	1,864,364

From the table it will be seen that the foreign market recovered from the falling off of 1910; and in addition to a growing domestic demand exceeded considerably the record of 1909. Corn oil cake and oil cake meal, too, showed a wholesome increase over the previous two years. In 1909, the value of the exports from this country of oil cake and oil cake meal was $707,418; in 1910, $862,-177, and in 1911, $1,121,020.

Olive Oil.

The most notable event of interest in the olive oil industry was the 1911 crop. According to reports received from Greece, Turkey, Italy, Spain, North Africa and France the crops, despite heavy rains, are record ones.

As a result of poor 1910 crops, the year 1911 opened with high prices. Bond was quoted at 90@95c. per gallon—a price so high that consumption of olive oil fell off. The shortage of supplies, however, was met by a limited demand and prices, accordingly, rose to 92@95c. per gallon in February, and by the end of the first quarter demand had fallen off to such an extent that dealers were offering at 88@90c. per gallon in March, which still further fell off in the next three months. Accordingly by July, bond was obtainable at 75@85c. per gallon.

In the same interval the markets for yellow old and olive oil foots ruled at a high figure throughout the first three months. Foots were quoted at 8c. per pound at the opening of the year and at 7¾c. by the first of April. During the second quarter both yellow and foots relapsed into routine dullness. In fact, foots sold at too high a figure to interest the textile industry. Foots were quoted in early summer at 6½@7¼c., according to quality. The situation was improved somewhat in September, when the textile interests came into the market for foots. No price changes were recorded as a result of the activity. Late in the fall when news of the new crop began to come in, buyers held off and the market became purely a routine one. Bond held steady at 80@85c. per gallon and foots were quoted at 7@7⅝c. per pound, according to dealer. By January little stock was available, but this had little effect on the market, as consumers were waiting for new crop oil.

The following table give the imports of commercial olive oil into this country for the past four years:—

	Gallons.	Value.
1908	1,074,091	$598,173
1909	414,395	229,396
1910	818,685	472,965
1911	.....	331,720

The subjoined table gives the high and low prices for each month from January 1, 1908, to December 31, 1911, with the average price for each year on commercial yellow olive oil, the figures being based on the closing quotations of each successive week:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	70	65	1.50	1.15	72	65	95	90
Feb.	70	64	1.60	1.50	80	80	93	92
March	69	67	1.60	1.50	80	80	95	90
April	69	67	1.50	1.50	80	80	90	88
May	69	67	1.50	1.40	80	78	87	86
June	67	65	1.50	1.40	78	78	87	85
July	69	67	1.35	1.30	79	80	85	75
Aug.	90	72	1.40	*95	85	85	80	80
Sept.	1.00	85	1.00	85	90	85	87	85
Oct.	1.25	95	1.00	85	90	90	85	80
Nov.	1.25	1.15	90	80	90	90	85	80
Dec.	1.35	1.20	85	65	90	90	85	80
Year	1.35	64	1.60	65	90	70	85	80

* After August 6, under the new tariff regulations, commercial denatured olive oil was entitled to free entry; prices are therefore quoted after this date in bond.

Imports of commercial olive oil at Liverpool for the past three years follow, in tons:—1909, 2,184; 1910, 3,174; 1911, 1,936.

The following table shows the total imports of olive oil in tons, at Liverpool in 1911:—

	1911.	1910.	1909.	1908.
Neapolitan—				
Gallipoli	...	....	....	....
Other sorts	...	....	....	....
Sicilian—				
Messina	...	....	....	6
Palermo	...	....	....	....
Spanish, etc.—				
Malaga	404	743	106	399
Seville	95	201	73	139
Lisbon	...	....	....	....
Ionian and Greek—				
Zante	13	10	35	122
Corfu	29	225	20	333
Other sorts	...	10	2	....
Levant, etc.—				
Candia	156	690	583	893
Smyrna, Aidin, etc.	265	308	280	180
Adramity, Mitylene, etc.	15	....	20	....
Tunis, Algiers and Tripoli	...	....	....	....
Syrian	...	....	16	....
Morocco—				
Saffi	...	....	....	....
Mogadore	...	....	....	....
Totals	917	2,198	1,135	2,072
	1907.		1906.	1905.
Neapolitan—				
Gallipoli	...	....		....
Other sorts	...	....		....
Sicilian—				
Messina	10	....		15
Palermo	...	....		....
Spanish, etc.—				
Malaga	...	13		432
Seville	19	10		620
Lisbon	...	....		4
Ionian and Greek—				
Zante	55	186		101
Corfu	189	873		15
Other sorts	...	245		....
Levant, etc.—				
Candia	278	909		62
Smyrna, Aidin, etc.	1,070	42		452
Adramity, Mitylene, etc.	...	30		....
Tunis, Algiers and Tripoli	...	27		....
Syrian	2	81		43
Morocco—				
Saffi	...	....		....
Mogadore	...	....		....
Totals	1,623	2,416		1,744

Palm Oil.

The immense demand for palm oil, which was so pronounced in 1910, continued in 1911 up to November. As a result prices were maintained abroad within a narrow margin of tallow, and at prices above American tallow and cottonseed oil. Thus, while the market abroad was good the number of orders from the United States fell off materially, consumers naturally turning to the cheaper substitutes. The situation at the beginning of 1912, however, was more promising. Supplies from Africa are increasing, and with the development of enterprise on the West Coast there seems to be no reason why an easier market during the coming year should not be expected.

LIVERPOOL STATISTICS OF PALM OIL.

	1911. Tons.	1910. Tons.	1909. Tons.	1908. Tons.
Stock, Dec. 31	2,000	483	1.657	1,289
Imports, Jan. 1 to Dec. 31	73,252	80,141	74,959	58,938
Deliveries, Jan. 1 to Dec. 31	71.577	81,315	74,591	60,089

The following table shows the relative imports of palm oil into the United States during the past three years:—

	Pounds.	Values.
1909	69,519,541	$3,851,066
1910	87,430,368	5,756,501
1911	45,488,406	3,238,166

The first part of the year was very disappointing to dealers in palm oil, and the volume of business done was relatively small. American tallow was to be had at reduced prices and soapmakers consequently could buy tallow cheaper than palm oil. The supplies in the primary markets, furthermore, were largely repleted and few sales were made. Lagos was sold on spot at 8⅛c. per pound, but shipment contracts were based on 6¾c. per pound.

These prices held to the summer months, and all trading was on future account, as no spot oil was available. During the spring months tallow was selling at such favorable prices that Lagos was practically neglected. According to position prices for shipment ranged from 6¼ to 6⅝c. per pound. By fall it was apparent that the palm oil market was far below the standard of the previous year. Not only had imports fallen off greatly but business was practically suspended. No spot oil was available in September, and owing to shortages in Liverpool, advanced, and Lagos for shipment was quoted at 7¾c. per pound. The situation continued to be strained, and the year closed with Lagos quoted at 6¾@7¼c. per pound for shipment.

Palm Kernel Oil.

At all times kernel oil reflected the situation in cocoanut oils, for which it is used as a substitute. The first part of the year witnessed a downward tendency in prices and a decline from 8¾@8⅞c. per pound at the beginning of the year to 7½@7.60c. per pound by April 1 was noted. Up to June the situation became firmer and palm kernel oil on spot was scarce. In fact, oil for shipment was quoted at 8.20c. per pound by July. The upward tendency continued throughout the summer and practically no oil on spot was available. Oil for shipment was quoted at 9 2-5c. per pound in September. The situation eased off somewhat in the last few months of the year, but trading was limited in amount. Prices at the close of the year were 8@8¼c. per pound.

Imports of palm kernels into Marseilles in the past five years follow:—

	Tons.		Tons.
1907	4,412	1910	1.639
1908	1,675	1911	3,086
1909	3,639		

Imports of palm kernel oil into the United States in 1911 totalled 11,201,-039 lbs., valued at $928.535.

IMPORTS OF PALM KERNELS, IN TONS.

	1907.	1908.	1909.
Into Hamburg and Harburg, January-December	188,019	193,468	235,616
Into Liverpool	23,450	20,226	17,306
		1910.	1911.
Into Hamburg and Harburg, January-December	256,668	280,429	
Into Liverpool	23,826	20,799	

Peanut Oil.

Peanut oil held a steady position throughout the year with practically no fluctuations in price. Soapmakers were in the market for normal amounts at all times and their demands were met by ample supplies. Taken in comparison with the previous year, the prices for soap stock oil were a shade higher.

Manufacturing interests found use for a grade of peanut oil inferior to soap stock and a better demand for peanut meal was noted. Oil on spot was quoted at 7@7¼c. per pound in the first quarter, and these prices held until the summer months, when a decrease of ½c. per pound was made. In September peanut oil regained the 7@7¼c. position, and the year closed almost unchanged at 7@7½c. per pound. Manufacturing grades were held unchanged at 65@85c. per gallon and meal was always available at $30@35 per ton, according to quality.

The following table of the value of imports for the past three years show the decline in 1911 due to ruling high prices in the primary markets abroad:—1909, $1,387,437; 1910, $3,359,146; 1911, $1,523,745.

Rapeseed Oil.

Prices ruled high for all grades of rapeseed oil during the greater part of the year; but particularly during the last half. A poor crop caused prices to soar to almost prohibitive prices, but, despite this, demand held steady, especially from rubber making interests and from lubricating oil interests.

New uses which were found for rapeseed oil in the previous year did not, on account of the shortage of supplies, pan out at all during 1911. In addition to the usual demand, fresh impetus came to the industry during the summer months as a result of the high cost of food supplies in Southern European countries, where a substitute for butter was manufactured from rapeseed oil.

The year opened with refined quoted at 62@64c. per gallon. Prices rose gradually to 68c. per gallon, which held throughout the summer months. Continued scarcity of supplies caused dealers to advance prices to 69@70c. per gallon in the first week of October, and after November 1 refined was to be had at 68@70c. per gallon, according to dealer, up to the close of the year.

The imports into the United States in 1911 were 629,277 gallons and the value was $336,194.* The decrease of imports in 1911 of colzas in France from 1910 was 19,180 kilos. The total imports in 1911 were 44,410 kilos.

*No government figures were taken of rapeseed oil alone before 1911.

Soya Bean Oil.

The price of soya bean oil kept fairly steady throughout the year. It scarcely competed with cottonseed oil in the soapmaking industry, although small quantities of it were used by soapmakers. The demand from other sources—chiefly in the paint industry—absorbed the greatr portion of the oil.

Bigland, Sons & Jeffreys, of Liverpool, have crystallized the crop situation:—

"Opinions as to the size of the present crop vary somewhat. Our own correspondents advise us that it will be about the same as last year, but we understand that other shippers estimate it at 25 per cent. less, while the representatives of the railroads consider it will be more. We think, therefore, that our correspondents' figures are reasonably likely to be correct, and we estimate it at about 1,300,000 tons, and we consider there will be about 150,000 tons more available for export to Europe than from the last crop, and we are informed that the requirements in China and Japan for the Eastern trade will not be such a large percentage of the crop as was taken last year.

"The feed value of the cake made from these beans is, relatively, on the same level as American decorticated cottonseed meal and the cake made from ground nuts and sesame seed; so that, with the high range of values now ruling for foodstuffs, we are of the opinion that the extra quantity of beans can be readily absorbed."

Manchurian soya beans have now firmly established themselves as a staple article of crushing. The imports to Europe from November 1, 1910, to October 31, 1911, were about 318,000 tons from Vladivostock and 15,000 tons from Dalny.

The imports into the United States totalled 11,285,935 lbs., valued at $665,-360 in 1911. The government furnishes no statistics of soya bean oil imports previous to 1911, and the foregoing figures do not include the year as all of the figures are not yet in (December 31, 1911).

The year opened unauspiciously owing to large arrivals of beans at the English crushing points. Prices of oil accordingly took a slump. Firmness ruled, however, in the far East and after the surplus English oil had been absorbed the market recovered. Thus at the beginning of the year dealers were offering oil at 7c. per pound on spot for English grades and 7½c. a pound for Manchurian and China grades. By the end of January 7¾c. per pound was the ruling price for English and Manchurian and Chinese oils commanded 8c. per pound. The plague, which broke out early in February in the far East, caused considerable excitement, and a corner in oil was feared, as the bulk of stocks was in the hands of but few dealers. The market, as a result, became stationary and by March Hull began to weaken, with the result that prices declined. By April 1 English was held at 7⅛@7⅝c., and Eastern oil at 7¼@7¾c. per pound.

The decline continued and in June all grades of spot oil were to be had for 6¼c. per pound. Meanwhile news of the new crop, which was unusually large—1,500,000 tons—caused dealers to become bearish in their quotations. Further, the uncertain position of linseed oil added to the tendency and the local market became comparatively dull during the summer months. A healthy advance came with the fall demand when competing oils advanced in price. Oil on spot was always available and 6¾c. per pound was quoted for all grades. Despite the advance in the Hull market of 3 shillings in September, oil was so plentiful in the local market that no further advances were made here.

The market rose to 7c. per pound for all grades in November, when the oil millers' strike in Hull caused a total tie up in stocks there. With the settlement of the strike in December the market again became easier and oil was to be had at 6½@6¾c. per pound. Little trading was done, however, and the year closed, dull and featureless.

	1909. H.	1909. L.	1910. H.	1910. L.	1911. H.	1911. L.
January	..	..	6.80	6.80	7½	7
February	..	..	6¾	6½	7¾	7¼
March	..	..	7¼	7	7⅝	7⅜
April	..	..	7½	7⅜	7	6⅞
May	..	..	7⅜	7⅛	7¼	6⅜
June	..	..	7	6⅝	6¼	6¼
July	..	..	7	6½	7	6¼
August	..	..	7½	7¼	6⅜	6¼
September	..	..	7.95	7.35	6⅜	6⅜
October	..	..	8	7.95	7⅜	7½
November	..	..	8	7⅜	7	7
December	6.65	6½	7⅜	7¼	6⅜	6⅜
Year	..	..	8	6½	7⅜	6¼

* Not previously reported.

Soya Beans and Oil in the United Kingdom.

Contributing to the somewhat disappointing year experienced by the British seed crushing industry in 1911 was the curtailed supplies of soya beans, which in consequence of the plague in Manchuria were shipped on a considerably reduced scale. As a matter of fact, British imports fell away some 900,000 quarters, the actual receipts of the different parts being as follows:—

IMPORTS OF SOYA BEANS INTO THE UNITED KINGDOM.

	1911.	1910.	1909.
To Hull, quarters..†	657,800	1,082,500	904,998
To Bristol Channel	60,700	214,700	253,035
To London	34,650	206,100	183,636
To Liverpool	163,750	205,150	346,487
To Scotland	36,600	124,850	121,604
Miscellaneous	37,700	57,700	33,500
Totals	991,200	1,891,000	*1,928,919

†About 480 pounds to the quarter.

*Including 85,659 quarters landed at Rochester, which is not separately included in the 1910-1911 figures.

The largest quantities went as before to Hull, but the great East Coast crushing center not only suffered from reduced raw material, but was further hampered by a strike lasting over a month in which neither beans were handled nor oil produced. This caused some diversion of trade to other crushing districts at home. A much larger proportion of the shipments of beans last year went to the Continent, especially Germany, than to Hull and, as a result, the price has been comparatively high, leaving small crushing margins. Taking quotations at the close of the first week in each month Harbin parcels have been on the following spot basis:—

	1911. £	s.	d.	1910. £	s.	d.
January	8	0	0	8	2	6
February	8	0	0	7	15	0
March	7	6	3	7	10	0
April	7	1	3	7	13	0
May	7	2	6	7	10	0
June	7	1	3	6	13	9
July	7	5	0	6	17	6
August	7	13	9	8	0	0
September	8	5	0	8	2	6
October	9	0	0	8	2	6
November	8	17	6	7	15	0
December	8	10	0	7	15	0
Close	8	17	6	7	18	9

The soya cake trade was not so good as in the previous year, there being a falling off in the export, and at home the farmer does not give the cake its full appreciation. Cakes in Hull opened at £6 and closed at £7 12s. 6d., after descending to £5 10s. London made finished at £7 17s. 6d., as against £6 2s. 6. The prices of the oil are indicated in the following table tracing spot values in London and Hull at the close of the first week in each month during the years 1911 and 1910.

LONDON.

	1911 £	s.	d.	£	s.	d.	1910 £	s.	d.	£	s.	d.
January	33	0	0	@33	5	0	28	0	0			
February	33	10	0				27	0	0			
March	33	0	0				27	12	6			
April	29	10	0				31	0	0	@31	5	0
May	29	10	0				31	0	0			
June	28	10	0				29	10	0	@27	0	0
July	28	10	0				27	0	0	@27	15	0
August	27	10	0				29	15	0	@30	10	0
September	30	0	0				29	15	0	@30	0	0
October	30	15	0				32	10	0	@32	15	0
November	31	0	0				33	10	0			
December	29	0	0				33	5	0	@33	10	0
Close	29	10	0				33	0	0			

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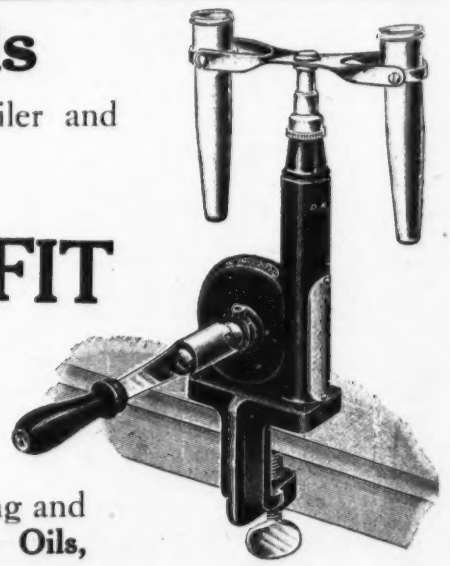

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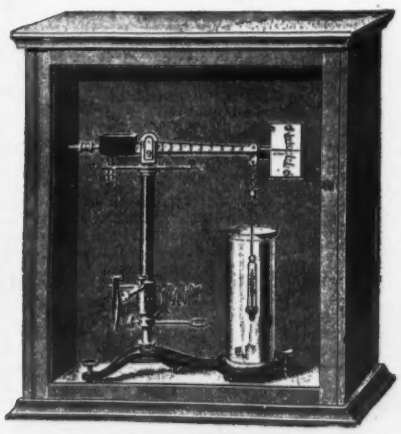

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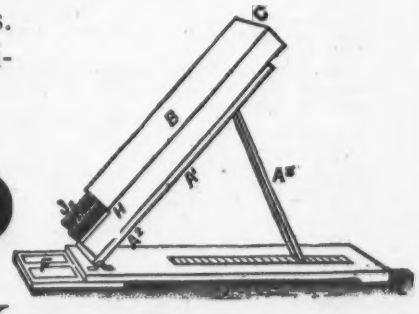

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HULL.

	1911. £ s. d.	1910. £ s. d.
January	30 17 6	26 15 0
February	31 5 0	26 0 0
March	30 10 0	26 12 6
April	27 10 0	30 12 6
May	27 5 0	30 10 0
June	25 15 0	25 5 0
July	25 15 0	26 0 0
August	24 15 0	28 0 0
September	28 15 0	29 5 0
October	27 5 0	30 5 0
November	29 0 0	31 10 0
December	25 5 0	31 5 0
Close	26 0 0	31 0 0

Prices thus showed a decline, an influence being the downward course of values for cotton oil. Soya oil maintains its popularity in diverse uses and its favor is likely to be increaed, as new industrial applications are found for it. All the same, soya crushing will probably never be as profitable as in the first two years of its adoption, competition militating against that.

Leghorn Exports to the United States.

Leghorn, Jan. 25, 1912.

The following table shows the exports from Leghorn to the United States during the year 1911 of those commodities represented by the Oil, Paint and Drug Reporter:—

OLIVE OIL.

1911.	Cases.	Kilos.	Amount, lire.
January, February, March	34,699 / 655	1,180,000	2,677,000
April, May, June	28,570 / 389	945,500	2,164,000
July, August, September	20,541 / 442	1,025,000	2,357,000
October, November, December	27,985 / 524	1,060,200	2,204,000

CASTOR OIL.

1911.	Cases.	Kilos.	Amount, lire.
January, February, March	20	1,240	1,700
April, May, June	39	2,520	2,700
July, August, September	39	2,520	2,700
October, November, December	....	....	....

ARGOLS.

1911.	Packages.	Kilos.	Amount, lire.
January, February, March	829	104,000	163,700
April, May, June	836	103,500	157,500
July, August, September	1,050	130,600	180,000
October, November, December	933	111,500	143,900

BEESWAX.

1911.	Bags.	Kilos.	Amount, lire.
January, February, March	91	8,800	29,880
April, May, June	174	16,900	58,250
July, August, September	34	2,900	10,005
October, November, December	136	12,500	43,000

JUNIPER BERRIES.

1911.	Bags.	Kilos.	Amount, lire.
January, February, March	700	41,600	9,200
April, May, June	400	24,000	5,500
July, August, September	757	45,200	10,070
October, November, December	1,962	129,500	32,500

BORACIC ACID.

1911.	Casks.	Kilos.	Amount, lire
January, February, March	97	58,300	24,900
April, May, June	95	54,800	24,200
July, August, September	72	40,100	18,050
October, November, December	82	53,400	23,400

ORRIS ROOT.

1911.	Bags.	Kilos.	Amount, lire.
January, February, March	1,145	90,300	74,600
April, May, June	503	49,300	42,700
July, August, September	682	51,300	48,400
October, November, December	1,034	99,600	76,800

SIENNA (EARTH).

1911.	Barrels.	Kilos.	Amount, lire.
January, February	416		
March	*640	149,060	26,250
April, May	439		
June	*200	116,500	20,200
July, August	206		
September	*1,200	175,350	27,500
October, November	253		
December	*634	235,000	35,000

*Bags.

ANIMAL AND FISH OILS.

Cod Oil.

The past year has been of interest because of the good prices that ruled throughout the year for both Newfoundland and domestic grades. The fishing season in the fall of 1910 was poor at the Labrador banks, and this was the cause of high prices for the early part of the year. Another poor season last fall failed to relieve the tension and, as a result, few changes were made in quotations.

The second week of the new year witnessed an advance in price of two cents for both Newfoundand and domestic grades. These prices, 57@59c. per gallon for Newfoundand and 55@57c. per gallon for domestic, continued until well along in March, when Newfoundwas increased to 56@58c. per gallon. Demand was good at these prices despite a shortage of supplies until the middle of April, when the scarcity of supplies and high prices forced a nominal market with occasional sales of round lots at 54@56c. for domestic and at an advance of two cents for Newfoundland. This condition held for the greater part of the summer and, as first hands had disposed of their stocks earlier in the year, little interest was displayed by buyers. Early in the fall the fishing fleets began to make their annual trip to the Labrador banks and all cod oil in the market was offered at concessions. As reports came in of another poor season a bullish tendency set in and dealers quoted firm at the same figures that had ruled in June. The market was further accelerated by good demands from abroad and prices were maintained almost unchanged up to the close of the year, on the basis of 56@58c. per gallon for Newfoundland and 53@54c. pergallon for domestic.

Lard Oil.

The lard oil market during the year was not quite up to the standard of previous years, although better, as a whole, than 1910, which was a decided off year. Trading was chiefly done by textile interests and lubricating oil interests, although rapeseed oil and degras oil were in large demand from this source. One reason given as a cause for the poor showing was the different interpretation of what constituted prime winter oil.

The year opened with prices quoted as follows:—Prime winter 95c.@$1, off prime 74@76c., extra No. 1 65@70c., No. 1 61@63c. and No. 2 59@61c. per gallon. Meal prices were held unchanged up to the middle of June, when lower prices obtained for prime winter.

The significant feature of the second quarter of the year was this drop of twenty cents per gallon for prime winter. In the face of a declining demand dealers had quoted it firm at 95c. per gallon, but private sales were reported during May and June at figures much lower than this, ranging from 80 to 88c. per gallon. It was inevitable, under these circumstances, that the card quotations should be materially reduced. The decline, however, met with little response from buyers and the market relapsed into seasonable quietness. New impetus came late in August, when the raw material market became strong. Good demand at this time caused a rise of 5c. per gallon on prime winter. Buyers, however, were conservative and bought lots only for immediate consumption. Early in the fall the foreign market declined and first hands reduced prime winter to 75@83c. per gallon. During November the market displayed a little stronger tendency, but by December 1 it had relapsed again into a comparative lethargy, so that no price changes were recorded. Thus, from early fall to the close of the year the prices were practically unchanged. The quotations, in full, were as follows:—Prime winter 75@83c. per gallon, off prime 65@71c. per gallon, extra No. 1 56@64c. per gallon, No. 1 53@62c. per gallon and No. 2 51@58c. per gallon.

The subjoined table shows the highest and lowest quoted prices for prime lard oil in the New York market for each month since January, 1907, and also the highest and lowest points touched in each year, from 1907 to 1911, the figures being based on the closing quotations of each successive week:—

	1907. H.	1907. L.	1908. H.	1908. L.	1909. H.	1909. L.	1910. H.	1910. L.	1911. H.	1911. L.
Jan.	75	74	74	65	78	73	1.28	1.20	1.00	95
Feb.	78	77	69	67	78	73	1.28	1.20	1.18	1.05
Mar.	78	77	70	65	80	75	1.28	1.10	1.05	95
April.	75	74	76	65	81	79	1.28	1.20	1.05	95
May.	73	73	70	67	83	80	1.20	1.20	90	80
June.	77	73	69	66	88	85	1.15	1.00	85	75
July.	73	72	69	66	90	88	1.00	1.00	75	72
Aug.	72	72	69	66	95	88	1.00	95	75	72
Sept.	72	71	75	65	96	95	1.02	95	80	80
Oct.	72	72	78	74	1.05	98	1.02	1.02	85	82
Nov.	72	71	76	72	1.10	1.05	1.05	95	85	80
Dec.	71	70	77	73	1.28	1.10	1.05	95	83	75
Year.	78	70	78	65	1.28	73	1.28	95	1.18	75

Menhaden Oil.

The year of 1911 was an important one in the menhaden oil industry. It witnessed the largest output of oil in the history of menhaden pressing, and it was also memorable because more men and more boats were put into the service. But quite the most distinctive feature was that new uses were found for it in the paint industry, in the linoleum industry and in the making of oilcloths. So wide is the field, that it is believed that the unusually large stock of oil will be consumed before new oil is available next summer.

Another note of importance should be sounded, perhaps, because last year marked the first experiment in far Southern waters, where the steamer Wills, in combination with a floating refinery spent the winter in prospecting for the elusive menhaden. Reliable reports as to the success of the venture are not at hand, but the industry in general is watching the experiment with interest.

Yet, despite the insistent demand for menhaden oil from various sources—including the tanning industry—it is doubtful whether the profits of those engaged in the industry have been unusual, for business as a whole has been done on narrow margins.

As pointed out in an editorial in the Reporter, which was widely quoted, the production of oil during the season of 1911 was in the neighborhood of 115,000 barrels, which compares with only about 72,000 barrels in the previous year. Of this great production about 74,000 barrels were made at the Northern fisheries, and 41,000 barrels at those of the South. The demand for oil had been so keen toward the close of 1910 that there was practically no carry over, and consumers were so eager to buy supplies early in 1911 that practically all of the production of the Northern fisheries was sold before a single fish had been taken from the sea. At the close of the season fully 85 per cent. of the crude product had passed out of the hands of the makers, and fully 60 per cent. had been passed on from the refiners and dealers to the actual consumers, both foreign and domestic.

The year opened with light and brown strained at 55@57c. per gallon. These prices held steady until May, when 56@57c. were the ruling quotations. June witnessed another drop of four cents, and from then on the market declined steadily up to October, when 45@49c. were the prices quoted. Save for the second week in October, when an advance of one cent per gallon was made, these prices held till the close of the year.

The following table shows the highest and lowest prices of light and brown strained menhaden oil in the New York market each month since January, 1907, and also the highest and lowest prices touched each year, the figures being based on the closing quotation each successive week:—

	1907. H.	1907. L.	1908. H.	1908. L.	1909. H.	1909. L.	1910. H.	1910. L.	1911. H.	1911. L.
Jan..	29	29	41	37	35	34	33	31	50	57
Feb..	31	30	41	37	33	33	35	31	59	57
Mar..	32	32	41	37	34	33	36	35	59	57
April.	32	32	*..	..	34	33	36	36	59	56
May..	32	32	*..	..	34	33	37	36	56	52
June..	32	32	*..	..	34	33	38	37	56	48
July..	32	32	38	38	34	33	38	38	48	46
Aug..	35	32	38	38	34	34	38	38	49	45
Sept..	38	35	36	35	33	32	42	38	49	46
Oct...	41	38	36	35	31	29	45	42	49	46
Nov..	41	41	35	34	31	29	52	48	49	46
Dec..	41	41	35	34	31	33	55	52	49	46
Year.	41	29	41	34	35	29	55	31	49	†46

*Nominal. †The parity of price between light and brown strained oils broke in December, when brown strained was quoted at 45c.

The exports of fish oil from the United States in the past three years follow:—

	Gallons.	Value.
1909	1,462,444	$348,864
1910	*1,322,293	728,920
1911	1,033,320	322,091

*Includes all kinds of fish oil.

Neatsfoot Oil.

Conditions in the local neatsfoot oil market have not, as a whole, met the expectations of dealers. While prices have not been subject to frequent or important fluctuations stocks have been relatively small and prices have been subject to demand at any given time. Bones and cattle products have been meager, causing a general high range of prices for the manufactured oil. This factor applied to the high cold test oils which cammanded, unchanged, prices ranging from 94 to 99c. per gallon. Consumers consequently have been buying sparingly, and lubricating oils which commanded, unchanged, ers, have turned largely to substitutes. The conservative houses which pursue a policy of continuing the constituents of their products, regardless of cost, have been in the market at all times for neatsfoot oils. Manufactured lubricating oils made by them, as a result, have been expensive, and the usual corollary to high prices—a weakened demand—has been their reward. Other houses which adulterate their oils have a better season to report. Thus a steady demand has come from conservative houses and from those pursuing a different policy, but at no time have unusually large sales of high grade oil been reported during the year.

The off grades found a better market than the high cold test oils, and the less conservative houses were large buyers of off grades for use as substitutes. Taken as a whole the year was routine and was unmarked by special features.

The year opened with 20 degree cold test quoted at 95c.@$1, 30 degree cold test 86@90c., 40 degree cold test 80@82c. prime 75@77c. and dark 63@65c. March saw an advance of two cents in the prime and dark grades, and by July, when supplies were especially scarce, the market as a whole assumed a stronger position; 20 degree cold test was quoted at 95c.@$1, 30 degree cold test 90@95c., 40 degree cold test 85@90c., prime 75@80c. and dark 60@65c. These prices held unchanged until well along in the fall, when dealers were inclined to shade in favor of buyers. The year closed with 20 degree cold test quoted at 94@99c., 30 degree cold test 88@95c., 40 degree cold test 85@90c., prime 66@80c. and dark, 55@65c. per gallon.

Red Oil.

Red oil enjoyed a steady demand throughout the year, and for the most part followed the course of tallow. Owing to the limited number of manufacturers and the various grades of red oil on the market, it is difficult to give an accurate idea of selling prices from time to time. Various dealers at different times commanded a fraction of a cent increase in prices over other dealers; but as a whole, the market has been steady and few price changes were made during the year. As in the case of lard oil and stearic acid, red oil followed the course taken by tallow; and the first of the year witnessed a decline to 6⅝@6¾c. for elaine and 7½@8c. for saponified. These prices ruled steady for the greater part of the year. Toward the close of the year reports of a good olive crop in Southern Europe had a weakening effect on the red oil market, for dealers in olive foots were quoting low enough for foots to be used as a substitute for red oil by wool combers. With fairly good supplies of foots available and new crop oil soon available, red oil manufacturers reduced prices of red oil late in the fall to 6½c. per pound for elaine and 7c. per pound for saponified. These prices, of course, varied according to seller, but were the quotations of leading interests up to the close of the year.

Stearic Acid.

Stearic acid held steady throughout the year with but two slight fluctuations of importance. It reflected in a large measure the course taken by tallow, but at no time was the market either very weak or on the other hand very strong.

Stearic acid in sympathy with tallow declined somewhat during the early part of the year and 9¾@10¼c. per pound was quoted for double pressed, and 8¾@9¼c. for single pressed. The continued decline of tallow caused another fluctuation in stearic and late in the spring, when double pressed was to be had at 9½c. a pound and single pressed at 8½c. per pound. This condition continued largely through the summer, but in the fall a better demand brought up the prices half a cent, so that by the close of the year double pressed was quoted at 10c. per pound and single pressed at 9c. per pound.

Sperm and Whale Oils.

The high prices of competing animal oils brought sperm oil into demand as a lubricant during the past year, but the chief demand came from tanning interests, where a routine market was the condition, more or less, throughout the year. A considerable stock of crude sperm was accumulated at New Bedford at the end of the year unsold. Whale oil was at all times scarce and prices held steady in sympathy with sperm oil.

The year opened with a dull market, which continued until the latter part of February, when sperm oil was lowered 5c. per gallon for all grades. Owing to the slowness of demand, New Bedford importers were unable to move the large stocks that had accumulated there from the previous fall. The reduced price of sperm oil gradually brought buyers into the market, but trading soon became routine. Little was done in whale oil owing to a scarcity of supplies, and dealers quoted firm, although the market was largely nominal.

May and June were marked by a brisk trading in crude sperm oil at New Bedford. Before June sales of 5,765 barrels of crude sperm were reported sold, mostly at 50c. per gallon, refined sperm was in good request and prices obtained follow:—Bleached winter, 38-degree cold test, 82@85c.; 45-degree cold test, 80@85c.; natural winter, 38-degree cold test, 79@83c.; extra bleached natural winter, 77@81c. Whale oil continued scarce and was quoted firm at 56@58c. for natural winter, 58@60c. for bleached, and 60@62c. for extra bleached winter.

In the summer months the market in sperm oil became sluggish and large stocks again began to accumulate at New Bedford. Refiners realizing the bearish influence of large supplies were not inclined to take hold even at concessions from previous prices. By the first of October New Bedford reported a stock of 6,075 barrels of sperm and 80 barrels of whale. The latter part of December saw the New Bedford stock reduced to 5,665 barrels, and again just before the new year to 3,785 barrels of crude sperm. The sale prices were not made public. Refined, however, continued at the former prices during the last half of the year. The quotations follow:—Bleached winter, 38-degree cold test, 76@78c.; 45-degree cold test, 74@76c.; natural winter, 38-degree cold test, 73@75c.; 45-degree cold test, 71@73c.

Arrivals of whale oil at New Bedford totalled only 130 barrels. No figures are available as to the imports at New-

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foundland, but they are believed to be much larger. Whale oil, owing to scarcity of supplies, was quoted firm throughout the year. The closing quotations were:—Natural winter, 50@52c. per gallon; bleached, 52@54c., and extra bleached winter, 54@56c. per gallon.

Imports at New Bedford.

The following table gives the date of arrival of each whaler at New Bedford and the amount of sperm and whale oils imported during 1911:—

	Bbls. sperm.	Bbls. whale.
FEBRUARY.		
11—Silvia C. Hall, N. B.....	1,750	....
MARCH.		
22—Steamer —, N. Y.....	....	....
MAY.		
..—Steamer —, N. Y.....	1,125	....
19—Richard W. Clark, N. B...	4,640	....
AUGUST.		
9—B. D. Nickerson, N. B....	600	....
12—T. Towner, N. B.....	520	....
17—Wm. A. Grozier, N. B....	400	....
18—Carleton Bell, N. B.....	300	....
21—Bertha, N. B.....	680	....
21—A. M. Nicholson, N. B....	340	80
23—Ellen A. Swift, N. B.....	450	....
9—Cameo, N. B.....	520	....
SEPTEMBER.		
4—Daisy, N. B.....	1,775	....
12—John R. Manta, N. B.....	500	....
21—A. V. S. Woodruff, N. B..	800	....
..—R. R. from Seattle, N. B..	....	....
OCTOBER.		
5—Laetitia, S. F.....	750	50
9—Gay Head, S. F.....	900	....
23—John & Winthrop, S. F...	500	....
28—Richard W. Clark, N. B..	4,065	....
31—Sullivan, N. B.....	1,300	....
NOVEMBER.		
9—Herman, S. F.....	....	....
5—Jeannette, S. F.....	....	....
9—Karluk, S. F.....	....	....
Totals	21,415	130

NEW YORK LINSEED OIL MARKET.

The New York linseed oil market, and, in fact, that of all other domestic and foreign centers, was almost continuously strong during the year 1911. The very short crop of seed in 1910, following a crop that was not sufficient to meet consumption in 1909, had created a condition of shortage that was extremely acute. Prices for oil had been high, very high, during the closing months of the previous year, and when 1911 opened there was a nervousness and uncertainty that made both sellers and buyers feel so much at sea that transactions were few. In spite of the optimistic figures which had been sent out by the government, every one knew by January that the shortage of seed would continue and that oil which had touched the dollar mark in September, 1910, might reasonably be expected to make a new high record. The official report from the Argentine which caused immediate flurry the first of the year was found to be below the real facts in the case, but it was still bad enough. It was then announced for the first time that the exportable excess in the Argentine would be at least 8,000,000 bushels below previous calculations.

During the opening weeks of the year the trading was phenomenally dull, both buyers and sellers feeling so much uncertainty that they were unwilling to make important commitments. During the previous year of high prices the consumers had been driven to the use of many substitutes, and it being the dull season for the paint industry there was little insistence from buyers. In the first week of January prices were a trifle firmer, although no change in quotations was made. Foreign oil was still being offered in the market, but the holders abroad were too stiff in their views to induce any extensive buying. In the Northwest the price of seed was climbing to record figures, and the crushers were uncertain of the future and willing to hold. Toward the middle of the month it began to be pretty generally known that the previous estimates of the Argentine flax seed crop would have to be materially scaled down and oil quotations in the local market began to move upward. Before the 20th of the month was reached the price of raw oil advanced to 94@95 cents per gallon, and the trading was limited to small quantities for immediate necessities. During the last week of the month the first importations of Argentine seed arrived, and also a small quantity of oil. Prices in all of the primary markets were phenomenally high and there was little encouragement to consumers.

The squeeze not only continued throughout February, but toward the middle of the month became somewhat lighter when 95c. was the rock bottom price at which oil could be obtained in car lots. Foreign seed had begun to come in, in fairly good volume, but the prices were so high that they made it impossible to reduce the price of oil with any safety. It was about this time that the trade began to realize fully that the government figures of the yield of seed in the United States were remarkably exaggerated and that the estimates which had been from time to time published by the Reporter—that the crushers would not receive more than 9,000,000 bushels of American seed were not too small.

The condition of high prices and dull trading extended well into March, and when prices finally began to recede as the spring season opened it was with a stubbornness rarely witnessed in any market. Up to the middle of the month 94@95c. was the selling price in car lots, and when in the last weeks of March concessions began to be made it was only of one cent at a time. At the end of th month 91c. was the actual selling price of one or two large lots, but the official quoted price of the large crushers had not been reduced from 95c.

With the opening of April the real decline began. Official quotations were reduced 4c. and the actual selling price was worked down as low as 88c. for heavy contracts. The seed market, both in the West and in South America, was very much below the high figures of the opening of the year, and altogether there was a less hysterical condition prevailing. Actual trade at this period was not what might have been expected for the season, but it showed an inclination to improve whenever concessions in the prices of oil could be secured. Receipts of foreign seed were fairly heavy and the seed markets of Europe had eased off to a marked degree. During the balance of the month the market continued to be fairly easy at about 87c., and sellers of oil began to realize in a marked manner to how great an extent substitutes had displaced linseed oil in the manufactures. Toward the close of the month business slackened on a stiffening of price, and little trading was done. The bottom figures at the end of April for car lots was 88@89c., and the market was featureless.

The opening of May saw prices ease off again, although the concessions in price brought little real recession in business. Oil could be bought in car lots as low as 87c. by the middle of the month and there began to be evidence in the market that many of the large consumers had their wants fairly well supplied. Toward the close of the month small lots were sold at the same figures, practically, that was demanded for wholesale quantities and the demand was not such as to inspire much hope of better things. Receipts of foreign seed, both in this country and in Europe, were quite heavy. The shipments from India to Europe were especially large, and the tone of the oil markets in those countries was decidedly bearish.

Trade in June, as is customary, became very slack. The active season of the mixers was over, or nearly over, and no consumer desired to carry into the next season any considerable quantity of oil which had been purchased at the prices prevailing during the first half of the year. Foreign oil, which had been sold liberally in this market during the season, was notably weak and quotations for forward shipments were far below those the American crushers were willing to accept. There was much talk about the actual consumption in America of linseed oil, and statistics were so confused by wide differences of opinion and the acknowledged widespread use of substitutes that the market was full of uncertainties. Prices gradually sagged and the first half of 1911 ended with prices at the lowest point since the beginning of 1911 and 12c. below the high record of February. Foreign oil was selling in round lots at 77½c., and domestic could be bought at 83c.

Prices for oil continued to sag during July and August, and about the first of the latter month car lots could be negotiated at 80c. which was the lowest point touched during the old crop year. Receipts of Indian seed continued to be very large and of excellent quality, but purchasers were wary and bought only for necessities to avoid a carry over into the new crop season, which at that time promised well. Trade was slow except for small lots during the entire two months and the market was weak until after August 15, when on account of the shortage of supplies there was a sharp upward movement. The crushers were in control of the market, and were inclined to mark up prices, and consumers who had not supplied their wants up to the middle of October, when some new oil might be expected, found themselves in an embarrassing predicament. The month of August, which had opened with oil at 80c., closed with sales at 85@86, and consumers had to pay what was asked. The leading sellers plead a shortage of oil and would not make contracts to supply others than their regular customers. The consumers were being punished for their apathy at earlier periods, and the result of the squeeze was that no one bought except under compulsion, and there was general soreness over the situation.

The same condition prevailed in September, when prices again crossed the 90c. mark and when consumers were made to feel keenly the pinch of those who controlled prices. The influx of foreign oil and of foreign seed had ceased and all the oil in the market was concentrated in a few hands and very tightly held. While the government at this time was proclaiming a crop for 1911 of something like 23,000,000 bushels, no one in the trade, neither crusher nor consumer, calculated that any such yield would eventuate and the reports of continuous wet weather in the Northwest helped to accentuate the gloomy anticipations. In the middle of September car lots were selling for 92c., but this was about the high price of the autumn squeeze.

In the early part of October oil became a trifle weaker under the influence of dull trading. There was practically nothing being done in futures and guesses to the probable size of the crop that was just beginning to be harvested were widely apart. Oil went down to 88c. in the first week of the month and vacillated between that and 85c. during the entire period, being quoted at the close at the latter figure. Toward the close of the month buying became a trifle brisker, but was still for small lots only.

With the beginning of November prices for oil began to decline and for a few weeks they went down with toboggan rapidity. The demand for oil was extremely light and the offerings of seed in the Northwest were very liberal. Although there had been a great deal of wet weather, the reports from the primary market at that time declared that the quality of seed being offered was excellent and the crushers were buying liberally. Prices dropped with almost every day's transactions and at the end of the month car lots were liberally offered at 71c.

From this period until well into December, there was a great deal of confusion and uncertainty in the market and trading, while fairly active, was rarely for any considerable commitments. About the middle of December prices reached the lowest notch of the year, 69c. being the figure at which car lot transactions were negotiated. About this time crop damage reports from Argentina and heavy receipts of damaged seed in the northwestern centers, where the harvest time had been very inclement, called a halt in the downward tendency and strengthened up the prices. Business stopped entirely during the holiday time and quotations were merely nominal, but the year closed with 71@72c. the best at which car lots were offered. Future sales which had been fairly good during the low period, were discontinued with the bracing up of the price and business was at a standstill.

The following table shows the spot prices at which car lots could be bought in the New York market on each Saturday during the year:—

1911.			
January 7.....	88	July 8.....	83
January 14.....	91	July 15.....	83
January 21.....	94	July 22.....	82
January 28.....	94	July 29.....	81
February 4.....	94	August 5.....	80
February 11.....	94	August 12.....	83
February 18.....	95	August 19.....	85
February 25.....	95	August 26.....	85
March 6.....	94	September 2.....	87
March 11.....	94	September 9.....	92
March 18.....	93	September 16.....	92
March 25.....	91	September 23.....	92
April 1.....	88	September 30.....	89
April 8.....	87	October 7.....	88
April 15.....	87	October 14.....	85
April 22.....	89	October 21.....	88
April 29.....	88	October 28.....	85
May 6.....	87	November 4.....	84
May 13.....	87	November 11.....	80
May 20.....	88	November 18.....	76
May 27.....	87	November 25.....	75
June 3.....	85	December 2.....	71
June 10.....	85	December 9.....	69
June 17.....	84	December 16.....	69
June 24.....	83	December 23.....	71
July 1.....	83	December 30.....	71

The following table gives the high and low current spot prices quoted ofr each month during the year, and also the highest and lowest touched during each year, from 1908 to 1911 inclusive:—

	*1908.		*1909.		*1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.....	42	41	54	48	75	71	94	87
Feb.....	42	40	55	52	75	74	95	94
March....	40	40	55	53	80	75	94	91
April....	40	39	53	52	82	80	88	87
May.....	42	40	58	53	82	80	88	87
June.....	41	42	60	58	80	76	85	83
July.....	42	41	58	50	88	77	83	80
Aug.....	44	42	58	50	88	87	85	80
Sept.....	42	42	56	49	99	88	92	87
Oct.....	40	38	62	50	96	95	89	85
Nov.....	47	41	63	60	95	94	84	73
Dec.....	46	46	71	61	94	87	71	69
Year.....	47	38	71	48	99	71	95	69

* The figures quoted are for contract lots of Western or State oil.

WESTERN LINSEED OIL MARKET.

Trade in linseed oil was quiet during the entire year. This was due to the scarcity and high cost of flaxseed, which rendered linseed oil very expensive. The price of linseed oil in a general way followed the price of flaxseed. The oil was far higher at the close of the year 1910 than it was at the opening of that year, but it was much cheaper at the close of the year 1911 than at the opening of that year.

Flaxseed was so scare and high during the first part of the year 1911 that the linseed oil trade was not once normally active. Oil consumers and paint manufacturers bought as little as they could get along with. Substitutions were very widely used in the manufacture of paint. The total shipments of linseed oil from Minneapolis in 1911 was only about two-thirds those of 1910. The extremely high price killed off the demand. Even after flax began to cheapen, the buyers of linseed oil continued to be bearish in their attitude, expecting to see linseed oil decline much farther than it did, although it was generally known that stocks of the oil over the country and in foreign countries as well were extremely low. It was not until December, 1911, that the oil trade of that year began to show a fair degree of activity and even a fair volume of business was very disappointing.

The price per gallon of raw linseed oil in carload lots at Minneapolis varied in January from 86 to 95 cents, dropped to 84 cents in February, rose to 94 cents in March, fluctuated in April between 86 and 89 cents, went down to 83 cents in June, moved in the neighborhood of 76 and 78 cents in July, rose in October to 85 and 86 cents and showed a very marked falling off in December, varying from 63 to 68 cents.

Shipments of lineed oil, in pounds, from Minneapolis in 1911 and 1910, were as follows:—

	1911.	1910.
January	7,510,222	11,639,000
February	6,667,473	12,572,260
March	10,134,017	14,439,110
April	7,042,470	14,513,482
May	7,687,279	12,981,951
June	6,800,980	11,636,543
July	5,148,134	7,713,578
August	4,464,084	5,725,117
September	6,776,873	8,924,705
October	12,078,952	12,849,267
November	13,466,014	10,981,605
December	9,787,257	6,864,779
Totals	97,563,755	130,841,397

LINSEED CAKE AND MEAL.

A great deal less linseed cake was sold by American crushers during the year 1911 than during the year 1910; because the oil trade was very slow, flaxseed was scarce and dear, and there was not much linseed cake to be had. There was a stiff demand for both cake and oil meal, as fast as the mills produced either, during the entire year, and both sold considerably higher than they did the year before. This was not so much because of a larger demand than existed in 1910, but because the output of the mills was so small, owing to the scarcity of flaxseed during the greater part of the year, that the market readily took all the cake and meal that was offered. The cake sold in 1911 from $2 to $3 a ton higher than it did in 1910.

Linseed cake at Minneapolis sold in January, 1911, at $30@31 per ton, in March at $27@28, in April at $27.50, in September at $35@36, in October at $36@37, in November at $33 and in December at $33@35.

Linseed oil meal sold in January, 1911, at $31@34, in March at $31, in April at $28.50@29, in July at $33.50, in November at $35 and in December at $34.50@37.50.

Shipments of linseed cake from Minneapolis in 1911 and 1910, in pounds, were as follows:—

	1911.	1910.
January	15,382,601	28,680,396
February	8,749,513	23,193,654
March	12,280,782	24,302,185
April	9,160,488	24,139,296
May	4,920,620	22,210,442
June	12,391,894	17,558,672
July	7,380,090	13,222,238
August	6,012,108	8,885,059
September	17,802,279	18,125,041
October	23,285,103	29,463,356
November	34,165,444	28,866,829
December	26,847,721	26,982,346
Totals	178,438,643	263,629,503

Minneapolis.

In glancing back over the trade for the year 1911, one of the first facts that impresses itself on the onlooker is the relatively small quantity of linseed oil and by-products that was shipped by the Minneapolis mills, compared with the preceding five years. The reason for the decrease, however, is easily accounted for. It brings home forcibly just how small the 1910 flaxseed crop in the United States really was, and how far out of line the government estimates of that crop were. The influence of the short crop was felt all through the year and necessitated a curtailment in output much earlier in the year than usual. The result was that not since 1905 have the oil mills of Minneapolis, as a whole, done such a small volume of business. Total shipments of oil for the year were 97,563,755 pounds, or almost 33,000,000 less than in 1910 and about 43,500,000 less than in 1909.

The year opened with buyers reluctant to take hold because of high prices. They were buying sparingly and only as their needs necessitated. An advancing market had no material effect on their attitude. During January raw linseed oil advanced 10c. per gallon on account of the corresponding strength in flaxseed, but instead of this inducing buyers to contract ahead, it seemed to have the opposite effect. They had no confidence whatever in the market. It was along towards the end of February or early in March before crushers could discern any improvement. Jobbers then began taking hold in a half-hearted way. They had argued themselves into believing that prices would have to decline, but, with no sign of weakness apparent, and the spring approaching, they were forced to buy. This made crushers a little more optimistic and they looked for an improved demand from then on.

Prices held fairly steady until about the last week in March, when flaxseed took a drop on weak cables from Calcutta and oil was reduced to the basis of 88c. Buyers apparently thought the long-looked-for decline was imminent, for instead of contracting freely at the decline, they bought only for urgent needs, and but an indifferent trade was reported. In fact, at no time during the first six months of the year could the oil business have been called satisfactory. Sales were confined mostly to jobbing lots for quick shipment, and indicated that consumers were stretch-

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ing their supplies to the last notch and practicing economies wherever possible. It was late in May before prices were again on the same basis they were at the beginning of the year. The spread between high and low point from January to June, inclusive, was 14c. a gallon.

In the meantime, Eastern mills had been working on imported seed and were doing most of the business. They were able to make quotations on oil that Western crushers could not compete with. In July only two of the seven oil mills in Minneapolis were operating, and these were running almost exclusively on Argentine and Indian seed. By-products were bringing higher prices than at any time earlier in the year, and this enabled the oil mills to reduce oil prices to 76c., or 19c. lower than high point during the first six months of the year. During July and August the range in oil prices was 76@82c. for prompt shipment. At times crushers were willing to discount this price for deferred shipment, but very little disposition was shown by consumers to anticipate their wants. As low as 66c. a gallon was quoted for new crop shipment, and while some contracts were placed by the large consumers on this basis, they were the exception rather than the rule.

During August Minneapolis mills continued to quote raw oil at 66@67c. per gallon in car lots for future shipment, and 76@82c. for prompt. Fair sales were reported, but mostly for prompt shipment. In September and October spot prices were advanced materially because of the slow movement of Northwestern flaxseed. Buying was perhaps better than at any other period of the year, although sales were still below normal. The timidity of buyers about placing contracts for their winter requirements was an unsatisfactory feature.

Low prices for the year were reached in November and December because of the rapid declines in flaxseed. It was not until then that supplies of raw material caught up with the demand. The high prices obtained for cake and meal were also factors in reducing asking prices for oil. The lowest quotation heard of was in December, when one mill asked 63c. for oil in car lots. Quite a little contracting was done around this basis, but it is doubtful if any of the local mills at the close of the year had anywhere near as many orders on their books as at the corresponding period in 1909 and 1910. Low point for raw oil for the year was 63c., and high point 95c.

MINNEAPOLIS OIL SHIPMENTS.

Shipments of linseed oil from Minneapolis by months during 1911 were as follows, in pounds, with comparisons:—

	1911.	1910.	1909.
January	7,510,222	11,060,639	9,401,177
February	6,667,473	12,572,260	8,958,729
March	10,134,017	14,439,110	12,329,433
April	7,042,470	14,513,482	11,963,394
May	7,687,279	12,981,951	9,789,744
June	6,800,980	11,636,543	12,816,222
July	5,148,134	7,713,578	12,061,911
August	4,464,084	5,725,117	7,828,761
September	6,776,873	8,924,765	11,124,719
October	12,078,952	12,849,267	18,030,728
November	13,406,014	10,981,605	17,101,211
December	9,787,257	7,130,060	9,664,199
Totals	97,563,755	130,468,317	141,070,228

	Pounds.		Pounds.
1908	157,278,837	1903	74,964,441
1907	122,853,646	1902	61,418,301
1906	108,365,078	1901	52,883,875
1905	87,557,484	1900	11,198,064
1904	64,798,309	1899	4,124,671

WESTERN LINSEED CAKE MARKET.

The year 1911 was an exceptional one in the linseed oil cake and meal markets. Total shipments from Minneapolis were unusually light compared with preceding years and prices were abnormally high. Cake for export sold at as high as $36.50 per ton, a record-breaking price for this commodity, and oil meal at $38. The spread between high and low in cake and meal was $8 per ton, compared with $5.50@6.50 in 1910. Low point for cake was $28.50, and for meal $29.50 per ton.

During January the export demand for cake was light. Bids were below a trading basis. Domestic demand for oil meal, however, was brisk and the oil mills were disposing of their surplus by-product at home. Late in the month oil meal was selling at a premium of $2.50 over cake. The customary differential is only $1 a ton.

In the first days of February the premium on meal was advanced to $3. Cake was quoted at $31 f. o. b. Minneapolis, and as stocks abroad were ample for nearby requirements, importers refused to advance their bids. Oil meal, however, was commanding $34. An endeavor was made at this time to depress the market. The local connection of an Eastern mill offered a limited quantity of meal at $31. This was quickly snapped up and on the same day bids for $32 a ton were refused by the same firm. Other crushers were of course forced to reduce their quotations to $32, but before the week was over $33 was being asked and obtained. Mills were running lightly and the demand exceeded the supply. Although meal prices were again reduced to $31.50 late in the month, the undertone was very firm.

At the beginning of March export bids on cake were reduced to $28 for prompt shipment, but sales were out of the question as long as domestic markets were taking the by-product of the mills at relatively better prices. The limited quantity of flaxseed arriving was inadequate to meet the demand and restricted the runnng of mills. Oil meal fluctuated in price $4.50 per ton during the first three months of the year.

Toward the end of March a brisk export demand developed for oil cake, for both prompt and deferred shipment. Stocks on the Continent were pretty well depleted and cake available for quick shipment or in transit commanded a premium of $1@1.50 a ton over prompt shipment. Bids were made on cake in transit at $29.50, while for prompt mills were asking $28. At the same time sales were booked for summer shipment at $27 a ton.

This condition prevailed all through April. Local mills, however, were not able to sell much cake for quick shipment because of the light receipts of seed. Eastern mills running on imported seed did a good business. Bids were advanced to $30@30.50 per ton, f. o. b. Minneapolis, for cake in transit, and sales were limited only by the quantity the mills had to offer. Good bookings wer reported for May-August shipment at $28 per ton. The domestic consumptive demand during this period had dropped off materially and feeders refused to take hold. Quotations were on practically the same basis. In fact, meal prices were merely nominal, because at times during April cake in transit sold at higher prices than mills were quoting meal at.

Throughout May and June only three or four Minneapolis mills were running and the by-product output was barely sufficient to meet domestic requirements, although latter were light. Importers' bids on cake were entirely satisfactory, but the mills here were temporarily out of the markt. Fluctuations in prices during the second quarter were $2.50 per ton.

In July foreign importers were dependent on current arrivals to keep going with. The drouth in Germany had a hardening effect on the market and bids on cake were advanced from $29.75 to $33 per ton, but under the circumstances Minneapolis mills had not much to offer. Domestic demand was more than sufficient to absorb the light offerings, and meal, late in July, sold at $35 a ton. The situation was unchanged during August, except that higher prices ruled in both domestic and export markets.

September saw the supply situation on the Continent becoming acute. The shortage of feeding stuffs in Germany created a very active demand. Importers were bidding $3 6a ton for cake for September shipment and $34 for October. Some round lots were booked on this basis. Seed supplies were still limited and handicapped the mills in running. Only four mills were running and these but part capacity. On account of the high prices being paid for cake, domestic quotations on meal were advanced to $37@37.50. These prices were beyond the reach of dealers here, and demand consequently was light. Feeders were using other feeding stuffs instead of oil meal, as they regard the latter as too much of a luxury.

At the beginning of the last quarter of the year stocks of oil cake on the Continent were estimated at not to exceed one-half of what they had been on the corresponding period in 1910. Buyers were anxious to obtain quick shipment and were willing to pay a premium of $1@1.50 a ton to obtain it. The Minneapolis mills had all the business they could handle and were able to contract ahead as far as their oil sales would warrant. Arrivals of flaxseed were disappointingly small for the season. A feature of the market during October was an advance of $2.50 a ton in bid prices for cake for future shipment. Late in the month December-March cake was bid up to $35 a ton f. o. b. Minneapolis. The spread in cake prices for the month of October was $6.50 a ton.

In their eagerness to obtain supplies, importers paid as high as $36.50 a ton at Minneapolis for cake late in October and early in November. A good business was done at this top price during the first week of November. After that, however, buyers withdrew from the market completely.

It evidently was a concerted move on their part to depress prices. Instead of the activity that had ruled, there was an entire dearth of inquiry and the consequence was that both cake and meal prices dropped fully $3 a ton. For two or three weeks this condition lasted, but with decreasing stocks and current arrivals going into immediate consumption, buyers were forced into the market again. They had gained their point, however, and the reaction was slow about setting in.

Early in December, December-January shipment cake was quoted at $33.50 a ton and prompt at $34.50. Latter was in best request. Buyers seemed to want only quick shipment. Deferred delivery sales were light. There was enough demand for quick shipment cake, however, to enable mills to hold their asking prices on meal well above the export basis and, consequently, sales of the latter were not up to standard.

Everything considered, the market for the by-products of the oil mills for the year was satisfactory. Whenever the domestic demand for meal was light, export inquiry for cake was good, and vice versa. Prices obtained, consequently, were usually very satisfactory and contributed in a large way to keeping the mills in operation, notwithstanding the light demand for oil.

PRICES.

Range of prices of linseed oil, linseed oil cake and linseed oil meal at Minneapolis, by months during 1911, with comparisons, were:—

1911.	Oil—	Cake—	Meal—
Jan	$0.85@0.95	$30.00@31.00	$31.00@34.00
Feb	.94@ .95	30.00@31.00	31.50@34.00
March	.88@ .93	27.00@29.50	29.50@30.50
April	.87@ .88	27.00@30.50	29.00@30.00
May	.84@ .89	28.50@29.50	30.00@31.00
June	.81@ .83	29.50@—	30.00@31.50
July	.76@ .82	29.75@33.00	31.50@35.00
Aug	.76@ .82	31.50@34.25	35.00@35.50
Sept	.81@ .88	33.00@36.50	37.00@37.50
Oct	.81@ .84	30.00@36.50	36.00@38.00
Nov	.66@ .80	31.00@36.50	34.00@37.00
Dec	.63@ 68	33.00@35.50	35.50@37.00
1910.			
Jan	.70@ .76	32.25@33.00	33.50@34.50
Feb	.71@ .73	32.00@33.00	34.50@—
March	.71@ .78	32.00@32.50	33.50@34.50
April	.77@ .82	30.50@31.75	32.00@33.50
May	.76@ .82	29.00@30.00	30.00@32.00
June	.68@ .76	27.50@29.00	28.50@30.00
July	.73@ .87	29.00@31.50	29.50@32.00
Aug	.86@ .57	31.50@32.00	32.50@33.00
Sept	.92@1.02	31.50@32.00	32.50@33.00
Oct	.94@ .96	29.75@31.00	31.00@32.00
Nov	.90@ .92	29.50@31.00	30.50@32.00
Dec	.83@ .90	30.00@30.75	31.00@32.00
1909.			
Jan	.47@ .51	28.00@28.25	28.50@—
Feb	.50@ .52	27.50@28.00	29.00@—
March	.50@ .53	27.00@28.00	28.50@29.00
April	.50@ .52	27.75@28.00	29.00@30.00
May	.51@ .56	28.25@29.50	29.50@30.50
June	.54@ .55	28.50@30.00	30.50@31.00
July	.52@ .55	28.50@30.50	31.50@—
Aug	.46@ .54	27.50@30.00	30.00@31.50
Sept	.47@ .50	28.00@29.00	29.50@30.00
Oct	.48@ .58	28.50@30.00	29.00@31.00
Nov	.56@ .60	29.50@30.75	31.50@32.00
Dec	.59@ .67	30.00@31.75	32.00@33.00

MINNEAPOLIS CAKE SHIPMENTS.

Shipments of linseed oil cake and meal from Minneapolis by months during 1911, in pounds, with comparisons, were:—

	1911.	1910.	1909.
January	15,382,601	28,680,395	28,041,594
February	8,749,517	23,193,654	25,329,029
March	12,280,772	24,302,185	26,016,046
April	9,160,488	24,139,296	10,429,470
May	4,920,620	22,210,442	7,040,365
June	12,391,894	17,558,672	5,092,122
July	7,380,000	13,222,238	8,473,694
August	6,012,108	8,885,659	10,364,277
September	17,862,279	18,125,041	19,150,634
October	23,285,103	29,463,356	37,150,563
November	34,165,444	26,886,829	39,728,536
December	26,847,721	28,885,742	27,500,781
Totals	178,438,643	265,552,909	250,317,131

	Pounds.		Pounds.
1908	311,771,079	1904	91,062,574
1907	236,428,501	1903	141,351,742
1906	217,479,247	1902	104,744,081
1905	121,138,145		

LONDON LINSEED OIL AND CAKE MARKETS.

A feature of the year was the large buying on this and the Continental market of seed for America. The earlier sentiments of operators were disturbed by varying reports as to the Argentine crop and both heavy bull and bear accounts were opened. The good demand for spot seed (accentuated by repeated orders from the United States) in conjunction with big "bear" influences caused sudden fluctuations in forward quotations for oil. Later the advent of the Indian crop afforded some relief, but all was required. By September, however, it seemed that the American and Plate seed crops would be large and prices began to yield, the falling away continuing for some time, although toward the close there was some recovery on reports of unfavorable weather in the crop areas in the Western Hemisphere. The extremes of closing prices for pipes on spot in London and for naked oil spot at Hull are here given as an indication of the course of values, similar figures for 1910 being added for comparison:—

LINSEED OIL.

	London spot pipes— 1910.			1911.		
	£	s.	d.	£	s.	d.
Jan	31	10	0@33	15	0	42 0 0@46 5 0
Feb	32	0	0@33	10	0	46 5 0@50 10 0
March	33	5	0@36	5	0	46 0 0@47 10 0
April	37	10	0@40	10	0	45 0 0@47 5 0
May	34	10	0@37	0	0	43 5 0@45 0 0
June	32	0	0@34	15	0	40 15 0@42 0 0
July	34	0	0@38	5	0	40 5 0@40 10 0
Aug	38	10	0@40	10	0	39 15 0@43 15 0
Sept	40	0	0@45	0	0	41 10 0@42 10 0
Oct	42	0	0@45	5	0	39 5 0@41 5 0
Nov	43	15	0@44	5	0	33 10 0@38 10 0
Dec	38	15	0@44	0	0	33 10 0@39 10 0

	Hull naked spot— 1910.			1911.		
	£	s.	d.	£	s.	d.
Jan	31	10	0@33	5	0	40 10 0@47 0 0
Feb	30	15	0@32	7	6	45 10 0@48 0 0
March	32	0	0@35	0	0	45 5 0@46 10 0
April	36	0	0@39	10	0	44 0 0@45 15 0
May	34	0	0@35	2	6	41 15 0@44 0 0
June	30	15	0@34	0	0	39 5 0@41 0 0
July	35	0	0@37	7	6	39 5 0@40 0 0
Aug	37	2	6@39	0	0	38 5 0@38 15 0
Sept	38	15	0@44	5	0	38 12 6@41 5 0
Oct	42	5	0@44	0	0	38 15 0@40 12 6
Nov	43	10	0			35 0 0@39 12 6
Dec	39	0	0@43	10	0	31 10 0@37 0 0

LONDON LINSEED CAKE MARKET.

	London made— 1910.			1911.		
	£	s.	d.	£	s.	d.
Jan	9	5	0@	9	10	0 8 15 0@ 8 17 6
Feb	9	0	0@	9	6	0 8 17 6@ 9 0 0
March	9	0	0@	9	2	6 9 0 0@ 9 2 6
April	9	0	0@	9	2	6 8 10 0@ 8 12 6
May	8	7	6@	8	10	0 8 0 0@ 8 2 6
June	8	0	0@	8	5	0 7 17 6@ 8 0 0
July	7	10	0@	7	12	6 8 0 0@ 8 2 6
Aug	8	17	6@	9	0	0 8 10 0@ 8 12 6
Sept	8	17	6@	9	0	0 9 5 0@ 9 10 0
Oct	9	2	6@	9	5	0 9 10 0@ 9 12 6
Nov	8	17	6@	9	0	0 9 5 0@ 9 7 6
Dec	8	15	0@	8	17	6 9 5 0@ 9 7 6
Close	8	12	6@	8	15	0 9 15 0@ 9 17 6

	Russian— 1910.			1911.		
	£	s.	d.	£	s.	d.
Jan	8	15	0@	8	17	6 8 10 0@ 8 12 6
Feb	8	12	6@	8	15	0 8 12 6@ 8 15 0
March	8	12	6@	8	17	6 8 12 6@ 8 15 0
April	8	12	6@	8	17	6 8 7 6@ 8 10 0
May	8	5	0@	8	7	6 8 5 0@ 8 7 6
June	7	17	6@	8	0	0 8 2 6@ 8 7 6
July	7	10	0@	7	12	6 8 0 0@ 8 2 6
Aug	8	5	0@	8	10	0 8 5 0@ 8 7 6
Sept	8	10	0@	8	15	0 Nominal*
Oct	8	12	6@	8	17	6 Nominal*
Nov	8	15	0@	8	17	6 Nominal*
Dec	8	10	0@	8	12	6 Nominal*
Close	8	10	0@	8	12	6 Nominal*

* Held for prohibitive prices.

NORTHWESTERN FLAXSEED MARKET.

Duluth.

Flaxseed was very scarce and high at the beginning of the year 1911. The flaxseed crop of the country for the year before, according to the government report, was but 12,718,000 bushels. This flaxseed dealers were wont to call about a third of a normal crop. In anticipation of a short crop, crushers during the year 1910 imported foreign flaxseed quite liberally, and these liberal importations continued after the shortness of the crop was a realized fact. During the year 1910 the total of importations of flaxseed amounted to 9,258,779 bushels. Of this total, 4,521,909 bushels came from Argentina, 2,880,278 bushels from Canada, 857,971 bushels from India, 635,228 bushels from England, 363,015 bushels from Belgium and 378 bushels from other countries. Importations were not so large during the year 1911, although supplies of flaxseed were very scarce. This was partly due to the fact that paint manufacturers used large quantities of substitutions for linseed oil, on account of its very high price, and partly to the anticipation and realization of a much larger yield of flaxseed in America in 1911. The total yield of 1911, according 000 bushels. Many flax dealers were wont to call this half a normal crop. It was almost exactly the same size as the flaxseed crop of 1909, when, according to government figures, the total yield was 19,513,000 bushels. The flax imported during the year was far less in quantity than that imported during the year 1910, the total for the year 1911 being 7,478,115 bushels. Of this total, 3,645,896 bushels came from Argentina, 2,677,427 bushels from India, 496,622 bushels from Canada, 354,812 bushels from Belgium, 246,599 bushels from England and 56,759 bushels from other countries. The increased importance of India as a flaxseed exporter is worthy of careful notice.

The exports of flaxseed during both of these years were so small as to be inconsiderable, being 4,274 bushels in 1910 and 941 bushels in 1911. Adding the crop of 1910 to the imports and subtracting the exports, there is a total of 21,872,505 bushels added to the American supply of linseed during that year. In the same way the total of flaxseed added to the American supply in 1911 is found to be 26,849,174 bushels. It is not surprising therefore, that though flaxseed was far higher at the close of the year 1910 than it was at the beginning of that year, it was much cheaper at the close of the year 1911 than it was at the beginning of that year.

It is interesting to note that there has been a steady increase in the flax growing acreage of the United States. In the year 1909, it was 2,083,142 acres; in 1910, 2,467,000 acres, and in 1911, 2,757,000 acres. In 1909 the yield per acre was 9.4 bushels, in 1910 5.2 bushels, and in 1911 7 bushels.

The bullish condition of the American flaxseed markets at the beginning of the year 1911 was enhanced during January by reports of a disappointing yield in Argentina. The already high price went yet higher. But the extremely high price had little effect in bringing flaxseed upon the markets from the American farms. The farmers could not bring to market what they did not have. The American flaxseed at that time could not compete with the Argentine product in the Eastern markets, even with the advantage of the duty. Flaxseed at that time was actually selling higher at Minneapolis and Duluth than it was selling in the East. Minneapolis was about the highest market in the world.

The same conditions persisted through February. Argentine flax, as well as the American product, was scarcer and higher than it was wont to be at that time of the year. About the middle of the month the Minneapolis elevators had but 41,470 bushels in stock, compared with 581,800 bushels a year before.

In March flaxseed was even scarcer. About the middle of the month the elevators at Minneapolis contained only 15,700 bushels, against 587,000 bushels a year before. Some of the linseed crushing companies took it upon themselves to persuade farmers of the Dakotas to sow as much linseed as usual during the coming fall, for it was feared that the poor results of the harvest of 1910 would discourage so many farmers with the raising of flaxseed that there would be a very short crop again in 1911.

In April so short was the supply from the American crop that orders were placed for Argentine flaxseed to

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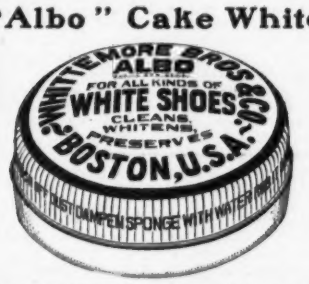

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be delivered at Minneapolis, coming via New Orleans. American seed at Minneapolis was selling for $2.47. A little later in the month, Indian flaxseed was being sold at Minneapolis, duty paid, for $2.50 a bushel.

The Indian flaxseed crop was at this time the one great bearish factor on the world's flaxseed markets. The Indian crop showed a gain of 1,500,000 to 3,000,000 bushels over the crop of the year before. Yet it was harvested without causing any material break in the flaxseed prices of the world.

During this month there came a gleam of hope for lower flaxseed as there was a good precipation over the Northwest, placing the ground in satisfactory condition for planting. The efforts made to induce farmers to do the normal amount of seeding of flax, notwithstanding the discouraging results of the harvest of 1910, seemed to be meeting with gratifying success. Some of the crushers went so far as to advance money to assist North Dakota farmers in buying first-class seed for the planting. A Western paint and lead company bought large quantities of first-class Argentine seed and distributed it to American growers at cost.

During May crop conditions in the Northwest seemed good for flaxseed. In the last days of the month the whole region had a fine wetting down. So scarce was flaxseed at this time that of the six linseed oil mills at Minneapolis, only three were in operation, and these at a reduced capacity. The whole output of linseed oil amounted to about one-fourth of the capacity of the mills. Linseed oil men feared that at the close of the crop year there would scarcelp be a bushel of flax anywhere in the country. Up to about a year before this country had been an exporter of flaxseed. Now it was an importer.

In June there were good rains all over the Northwest. This was very good for flaxseed crop prospects. Yet the supplies of the seed were so low that it seemed that the time was not far away when there would be a total closing down of the Minneapolis mills for want of material. The public stocks at Minneapolis went down to 3,652 bushels, against 263,412 bushels a year before.

About the middle of July intense heat and drouth threatened the flax crop of South Dakota, but later in the month general rains over the three Northwestern States made the outlook promising. A little flaxseed kept arriving on the Minneapolis and Duluth markets. In August thrashing operations were delayed by too much rain, and late in the month there was danger of frost damaging the flaxseed crops.

Receipts of flaxseed began to increase early in September, though they were still surprisingly small, by reason of rains interfering with the thrashing. The price of flaxseed remained very high. The conditions of the two previous years had brought about an entirely cleared-up market in both seed and oil throughout the world. The Argentine yield had proved to be only about 16,000,000 bushels, against a normal crop of 30,000,000 bushels. The situation resulted in the use of adulterants for paint, such as corn oil and cotton oil.

During October rains still delayed the harvesting of the crop and kept the price of flaxseed phenomenally high. The close of Lake Superior navigation was not far off and it was feared that there would not be enough flaxseed on the market to supply the American crushers until the Argentine product should arrive. Argentine flax, it was known, could not be received much before March 1.

Early in November the movement of flaxseed became much faster. There was a sharp decline in the prices, owing to the free marketing of the North Dakota product. Later in November there was a materially lower range of prices. Argentine crop prospects were brilliant. During the last days of November flaxseed was down in the neighborhood of $2 a bushel. Buyers were conservative, thinking it ought to go still lower. The North Dakota fields at this time were pretty well covered with snow and much flax was snowed under.

In December the chief feature of the flax market was the large and increasing quantity of seed of poor quality arriving. This was due to unfavorable weather throughout the Northwest. Receipts of flaxseed, however, reached very fair proportions. The total was rapidly gaining on the receipts of the crop of the year before. The run continued quite free during the entire month, though good dry seed was scarce in the Northwest. The prices ranged slightly higher than in November. This was largely owing to bad weather in Argentina.

PRICES.

The monthly range of closing prices for cash seed in the Duluth market in the calendar year of 1911, with comparisons of the previous year follows:—

	1911	1910
January	$2.47 @2.68½	$2.02 @2.27
February	2.63⅞@2.70¾	2.15 @2.20¼
March	2.46 @2.67	2.17 @2.35
April	2.48 @2.62	2.32 @2.46
May	2.21 @2.61	2.08 @2.38¼
June	2.06 @2.34	1.89 @2.20
July	2.05 @2.19	2.10 @2.67
August	2.10 @2.52	2.42½@2.60
September	2.27 @2.65	2.34 @2.84
October	2.12 @2.47	2.41¾@2.69
November	1.93 @2.17½	2.50 @2.74
December	1.94 @2.18	2.31½@2.54½

The monthly range of closing prices for cash seed at Minneapolis in the calendar year of 1911, with comparisons of the previcus year, follows:—

	1911	1910
January	$2.46 @2.68	$2.02¾@2.27¾
February	2.63⅞@2.70¾	2.16 @2.20¾
March	2.46 @2.66¼	2.18¼@2.34¾
April	2.48 @2.62	2.31¾@2.33¾
May	2.21 @2.61	1.98 @2.38¼
June	2.06 @2.35	1.89 @2.17
July	2.04 @2.18	2.10 @2.55
August	2.10 @2.50	2.41 @2.55
September	2.27 @2.65	2.45 @2.61
October	2.12 @2.46½	2.41¾@2.70
November	1.93 @2.17½	2.50 @2.70
December	1.95½@2.14	2.32½@2.55½

The monthly range of closing prices for cash seed at Chicago, No. 1 Northwestern, in the calendar year of 1911, with comparisons of the previous year, follows:—

	1911	1910
January	$2.37 @2.70½	$2.02 @2.26
February	2.54 @2.74½	2.14 @2.22
March	2.35½@2.69	2.18¼@2.35
April	2.39½@2.63½	2.30 @2.42½
May	2.25½@2.55	2.16 @2.42½
June	—@—	1.85 @2.18
July	—@—	2.07½@2.55
August	2.35 @2.57	2.45 @2.57½
September	2.27 @2.69½	2.34 @2.84
October	2.13 @2.47	2.42 @2.70
November	1.93 @2.17	2.50 @2.73
December	1.94 @2.16	2.35½@2.57

The monthly range of closing prices for cash seed, No. 1 Southwestern, at Chicago in the calendar year of 1911, with comparisons of the previous year, follows:—

	1911	1910
January	$2.37 @2.57½	$1.92 @2.15
February	2.54 @2.61½	2.04 @2.12
March	2.35½@2.55	2.09½@2.25
April	2.39½@2.51½	2.20 @2.32½
May	2.42 @2.42	2.06 @2.32½
June	—@—	1.75 @2.08
July	—@—	1.07½@2.45
August	2.22 @2.44	2.23 @2.38
September	2.14 @2.56½	2.21 @2.70
October	2.00 @2.34	2.29 @2.57
November	1.80 @2.04	2.37 @2.60
December	1.81 @2.03	2.22½@2.44

The monthly range of closing prices for May seed at Duluth compared with the closing prices for the May option in 1910 follows:—

	1911	1910
January	$2.50 @2.70½	$2.02 @2.27
February	2.62⅞@2.70	2.15¼@2.20¼
March	2.45 @2.66	2.17 @2.35
April	2.47 @2.61	2.32 @2.46
May	2.21 @2.60	2.08 @2.38¼
June	—@—	—@—
July	—@—	—@—
August	—@—	—@—
September	—@—	—@—
October	2.13½@2.32	2.34 @2.64
November	1.07½@2.17	2.49 @2.62
December	1.99 @2.14	2.37 @2.50½

The monthly range of closing prices for July seed at Duluth for the calendar year 1911, with comparisons of the previous year, follows:—

	1911	1910
January	—@—	—@—
February	—@—	$2.18 @2.18
March	—@—	2.17½@2.32
April	$2.50 @2.61	2.29 @2.41
May	2.21 @2.59	1.98 @2.33
June	2.07 @2.35	1.89 @2.20
July	2.05 @2.19	2.10 @2.75
August	—@—	—@—
September	—@—	—@—
October	—@—	—@—
November	—@—	—@—
December	—@—	—@—

The monthly range of closing prices for September seed at Duluth in the calendar year of 1911, with comparisons of the previous year, follows:—

	1911	1910
January	—@—	$1.65 @1.80
February	—@—	1.68 @1.71
March	—@—	1.70 @1.82
April	$2.02½@2.05	1.75 @1.88
May	1.86 @2.20	1.67 @1.76½
June	1.84 @2.07	1.65 @2.12
July	1.96½@2.10	1.93 @2.55
August	2.00 @2.34	2.41 @2.55
September	2.27½@2.65	2.34 @2.83
October	—@—	—@—
November	—@—	—@—
December	—@—	—@—

The monthly range of closing prices for October seed at Duluth in the calendar year of 1911, with comparisons of the previous year, follows:—

	1911	1910
January	—@—	—@—
February	—@—	—@—
March	—@—	$1.64 @1.72
April	—@—	1.65½@1.77½
May	$1.78 @2.00	1.58 @1.68¼
June	1.77 @1.95½	1.57¼@1.96
July	1.90 @2.02	1.81 @2.41
August	1.92 @2.19½	2.29 @2.40
September	2.16 @2.44	2.34 @2.72
October	2.15 @2.45	2.41¾@2.69
November	—@—	—@—
December	—@—	—@—

The monthly range of closing prices for November seed at Duluth in the calendar year of 1911, with comparisons of the previous year, follows:—

	1911	1910
January	—@—	—@—
February	—@—	—@—
March	—@—	—@—
April	—@—	—@—
May	—@—	—@—
June	—@—	—@—
July	—@—	$1.97 @2.40½
August	$1.99 @2.19½	2.29 @2.39½
September	2.15 @2.44	2.34 @2.72
October	2.12 @2.39½	2.41¾@2.69
November	1.93 @2.17½	2.50 @2.74
December	—@—	—@—

The monthly range of closing prices for December seed at Duluth in the calendar year of 1911, with comparisons of the previous year, follows:—

	1911	1910
January	—@—	—@—
February	—@—	—@—
March	—@—	—@—
April	—@—	—@—
May	—@—	—@—
June	—@—	—@—
July	—@—	—@—
August	$2.03 @2.16	$2.23 @2.34½
September	2.13 @2.40	2.29½@2.69
October	2.10 @2.35½	2.37 @2.64
November	1.93 @2.15	2.50 @2.69½
December	1.94 @2.16	2.31½@2.54½

RECEIPTS AND SHIPMENTS.

Receipts at Duluth by months in the calendar year of 1911, with comparisons of the previous year, follow:—

	1911, bushels.	1910, bushels.
January	64,275	172,639
February	57,302	41,865
March	36,778	59,092
April	18,432	123,440
May	17,664	148,195
June	13,335	57,491
July	37,709	179,501
August	14,341	50,936
September	282,402	386,687
October	1,123,111	837,965
November	3,059,729	1,457,368
December	1,277,159	370,001
Totals	6,002,237	3,885,180

Shipments of flaxseed from Duluth in the calendar year of 1911, with comparisons of the previous year, follow:—

	1911, bushels.	1910, bushels.
January	55,443	262,149
February	90,957	33,915
March	25,913	63,729
April	40,085	184,232
May	85,457	165,936
June	7,296	162,544
July	1,000	151,394
August	148,481	98,498
September	119,672	253,183
October	979,510	613,653
November	2,318,068	1,507,025
December	1,511,772	480,313
Totals	5,373,654	3,976,571

Receipts of flaxseed at Minneapolis in the calendar year of 1911, with comparisons of the previous year, follow:—

	1911, bushels.	1910, bushels.
January	237,710	965,840
February	299,620	669,700
March	231,630	826,200
April	112,220	436,530
May	118,270	222,140
June	121,640	159,420
July	132,600	123,900
August	191,250	736,900
September	563,940	853,670
October	1,211,930	1,529,820
November	1,569,810	1,290,890
December	1,716,120	486,620
Totals	6,506,740	8,300,760

Shipments of flaxseed from Minneapolis in the calendar year of 1911, with comparisons of the previous year, follow:—

	1911, bushels.	1910, bushels.
January	26,210	69,360
February	29,760	93,140
March	34,590	111,870
April	36,960	153,430
May	73,420	148,710
June	19,640	88,650
July	3,700	32,500
August	8,590	24,600
September	106,010	174,950
October	223,040	206,510
November	314,560	295,070
December	212,040	49,120
Totals	1,088,520	1,446,910

Receipts of flaxseed at Fort William and Port Arthur in the calendar year of 1911, with comparisons of the previous year, follow:—

	1911, bushels.	1910, bushels.
January	26,000	215,000
February	53,000	94,000
March	95,000	135,000
April	85,000	258,000
May	51,000	139,000
June	25,000	30,000
July	59,000	45,000
August	19,000	14,000
September	19,000	182,000
October	389,000	1,118,000
November	959,000	1,174,000
December	856,000	496,000
Totals	2,636,000	3,900,000

Shipments of flaxseed from Fort William and Port Arthur in the calendar year of 1911, with comparisons of the previous year, follow:—

	1911, bushels.	1910, bushels.
January	49,699	113,179
February	126,788	147,413
March	64,333	105,568
April	7,844	175,613
May	181,327	459,690
June	164,924	175,412
July	47,623	103,893
August	62,110	26,626
September	44,039	11,354
October	58,416	345,357
November	201,801	1,188,419
December	804,790	600,000
Totals	1,813,694	3,452,524

Receipts of flaxseed at Chicago in the calendar year 1911, with comparisons of the previous year, follow:—

	1911, bushels.	1910, bushels.
January	49,500	96,300
February	96,000	108,900
March	47,000	76,000
April	27,500	75,200
May	41,400	74,000
June	125,700	37,000
July	56,800	13,000
August	72,900	105,300
September	54,600	183,600
October	122,100	189,000
November	121,600	235,600
December	144,400	123,700
Totals	959,500	1,317,600

Shipments of flaxseed from Chicago in the calendar year of 1911, with comparisons of the previous year, follow:—

	1911, bushels.	1910, bushels.
January	11,300	10,420
February	12,700	13,381
March	6,000	14,450
April	7,500	18,949
May	11,200	11,450
June	11,650	12,000
July	15,850	17,300
August	2,400	11,200
September	16,000	49,000
October	52,000	25,300
November	12,600	30,500
December	6,400	25,700
Totals	165,600	245,640

Stocks of flaxseed in public stores on the first day of each month in 1911, at Duluth and Minneapolis, follow in bushels:—

	Duluth. bushels.	Minneapolis. bushels.
January	224,421	135,492
February	214,874	60,734
March	207,687	28,805
April	210,740	14,538
May	173,967	12,745
June	121,917	3,609
July	129,689	4,457
August	142,785	7,252
September	31,058	643
October	129,582	7,545
November	411,271	55,304
December	848,263	151,467

Minneapolis.

In reviewing the course of the flaxseed market during 1910, stress was laid on the exceptionally high prices that had ruled that year. The year 1911, however, almost proved a repetition. High point in 1910 at Minneapolis was $2.70 in October and November, but $2.70¾ was reached in February, 1911. The average closing price for 1911 was around $2.32, against $2.40 in 1910. Closing prices for the year ranged from $1.93 to $2.70¾, compared with $1.89 and $2.70 in 1910. The widest spread was in August, the closing prices that month showing a range of 40c.

The year opened with light stocks at both Minneapolis and Duluth. The movement was of small volume and crushers were looking towards the Winnipeg market for supplies. An item of interest at this time was the ruling by the Commerce Department at Washington, making the tariff of 25c. per bushel on flaxseed imported from Canada apply only on the cleaned seed and not to the dirt, screenings, etc., in the seed. The ruling was the result of a protest on the part of a Minneapolis mill filed some time previously.

The undertone of the market was very strong, as the available supplies were insufficient to meet the demand. During the opening week of the year bid prices were advanced 5c. without bringing out any increased offerings. Some of the large interests then took matters into their own hands and attempted to force offerings by reducing the price, but without result. May seed was depressed 7c. about the middle of January, but holders refused to let go. After the pressure subsided the market quickly reacted. The scarcity of seed became so pronounced late in January that Minneapolis crushers were forced to buy large quantities of Argentine seed. About half a million bushels were purchased for February-March shipment. It was understood at the time that the purchases of foreign seed were in the nature of hedges against sales of oil and that they did not necessarily mean that all of this seed would be brought to Minneapolis. As it afterwards transpired, only a little was actually brought here and to Chicago. The remainder was disposed of abroad and in the East to advantage.

Decreasing receipts and stocks at terminals in the Northwest, with Chicago and other markets drawing on supplies here, kept prices gradually advancing. There was no active demand, as crushers were trading conservatively, taking what little was offered and refraining from aggressiveness to keep prices as low as possible.

In February, considerable attention was being given the proposed Canadian reciprocity pact, and the passing of the bill by the House at Washington caused a bearish sentiment and temporarily depressed values. Crushers took advantage of the opportunity and were active traders but, with offerings so limited, the weakness in price did not last long.

It became evident early in the year that supplies of seed flax in the country were very light and that if anywhere near a normal acreage was to be planted in the spring something would have to be done. Northwestern crushers took an active part in providing good clean seed. Some oil mill men spent the greater part of their time campaigning for a large acreage of flax and in spreading an educational movement among farmers as to how to properly handle seed before planting. In this they had the hearty co-operation of the paint and varnish interests of the country. A little Russian flaxseed was brought in, it being thought that this variety would prove superior to Argentine or Indian seed for Northwestern soil because of climatic conditions here.

Early in March the flax market was devoid of interest. Speculators were absent and transactions were governed by the light cash business passing. This indifferent demand continued through most of the month. The fact that the oil mills were curtailing operations, of course, took the edge off of the demand for seed. Late in March, long holders tired of their burdens, and, in the face of weakness abroad, commenced unloading. The result was a break of 20c. in one day. Little support was given the market by the large crushers, and what little buying was done was for shipment back to the country for seeding purposes. The result was that up until the end of the month very little of this shrinkage in price was regained.

April opened with the cash market at both Minneapolis and Duluth very quiet. Offerings, however, were light, and any marked inquiry on the part of crushers was followed by an advance. Stronger foreign cables put up prices 5@6c. about April 5. From this time on there was a rather strong demand for seed for shipment to the country for planting. Stocks at Duluth were around half a million bushels, and it was expected that not to exceed 100,000

bushels of this would be left, after seeding requirements had been filled, for shipment after the opening of lake navigation to Eastern crushers. This demand from the country caused a slight hardening of values up until the end of the month. The first transaction in new crop seed was reported from Duluth April 25, selling at $2.05, or 55c. under the closing price of the May option on that day.

For the first half of May the cash market was simply a seeding proposition. Practically the only cash demand was for shipment to the country. No disposition was shown by crushers to take hold. They were, however, beginning to show interest in the September option, and the result was a strengthening in the futures. The dullness in the cash market was ascribed to the fact that Western crushers could not buy seed and market the oil at prices that would come anywhere near the quotations of Eastern oil mills working on imported seed. Receipts of seed at Minneapolis were rather good during May, considering the supply situation, but the seed was coming here to be cleaned and afterwards reshipped to the country. The last ten days of the month offerings showed some increase, but, without buying support on the part of mills, prices broke sharply, May and July declining 31c., September 17c, and October 18c. The increased offerings were believed to be due to the fact that seeding requirements were about filled, and, as they had not been as heavy as anticipated, the surplus was thrown on the market.

Activity developed in the near option early in June. There was considerable speculative buying and crushers were also in evidence. July seed advanced 12c. up to June 10, against only a 6c. advance in new crop options. On June 17 one of the Minneapolis mills received a car of seed from India. It was the initial shipment of a lot of 100,000 bushels purchased in Calcutta. Another company here was receiving Indian seed at its Chicago mill. It was crushing this seed at Chicago, instead of at Minneapolis, because of the material saving in freight rates, since the by-product was to be exported in order to obtain the drawback.

On June 19 heavy offerings of July seed upset the market, and this option dropped 21c. On the same day, September and October seed advanced 3c. and 2c., respectively. It developed, however, that the July option was oversold to a considerable extent and the following day, June 20, 15c. of the loss was regained. Minneapolis public elevator stocks of seed were abnormally light during the second quarter of the year, and at times were less than 4,000 bushels all told. During the last week in June spot prices declined 10c.

Sharp fluctuations were noted during the first few days of July, the option advancing 13c. in two days and falling off 11c. the following day on the offering of a small lot of seed by a Duluth elevator. On July 8, the July option at Duluth closed at a discount of 2c. under the September for the first time in the history of the two options. Little interest was shown in the market, traders awaiting the movement of the new crop. At times the cash market was insufferably dull. For the most part, trading was confined to the futures, resulting in sharp reductions in cash seed. The first new crop seed arrived in Minneapolis, August 5, from Northern Iowa, and a car was received from Southern Minnesota, August 7.

The first week in August saw a change in the cash situation at both Minneapolis and Duluth. Outside interests were insistent buyers, taking all offerings regardless of price. The consequence was an advance of 24@25c. the first half of the month. Receipts were light and stocks were reduced to a minimum. The strength in the cash market stimulated activity in the options and these showed a sympathetic advance. No large volume of business, however, was worked. Increasing receipts late in August broadened the market somewhat, but, with buyers standing reading to absorb all offerings, values remained fairly steady.

Delay in the movement of new seed caused a very bullish sentiment and greatly strengthened the market. In

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the first week in September cash seed advanced 20c. and the September option 28c. Crushers were active and their aggressiveness was responsible for the advance. Country shippers took advantage of the opportunity, but as soon as their offerings increased perceptibly, the market sagged and cash seed fell off 10c. Unfavorable weather throughout September caused an unsettled feeling. Local crushers needed the seed, but it was moving exasperatingly slow, and they were unable to get enough to fill orders with. The market fluctuated sharply at times and the spread between low and high points in cash seed at Minneapolis during September was 38c. Eastern crushers were noticeably absent, as they had no confidence in prices and believed that as soon as normal movement from the country set in values would settle materially.

By October 1 only a small percentage of the Northwestern crop had been cut. Heavy rains delayed threshing of that already cut and returns from the flax growing territory were meager. Movement to terminals was not anything like what had been expected. In fact, the crop was declared by the trade to be the latest ever harvested. This naturally caused a nervous market, especially as Eastern crushers were beginning to pick up supplies for shipment before the close of lake navigation. Quality of seed arriving showed the effect of too much rain. Some of it was badly "field" damaged, that is, had lain out in the rain for some time without protection after being cut. By October 15, notwithstanding the larger crop, receipts at the two Northwestern markets were very much smaller than in the same period the proceding year. It was not until the end of October that receipts were heavy enough to supply the urgent demand from Western oil mills. Cash seed declined 27½c. during the last week of the month. Futures also showed a loss of 18@22c.

The first of November saw continued weakness and heavy declines in track seed on account of the pressure of offerings from the country and increased movement. This was only a temporary spurt, however, as snow and cold weather stopped field operations. Receipts continued fairly heavy and stocks increased rapidly at the head-of-the-lakes. Eastern shipments were heavy. Several cargoes were loaded out as the end of the lake season approached, steamers on November 20 taking out over half a million bushels. Eastern interests were anxious to get as much in transit as possible before the last boats left and took on all offerings. Notwithstanding the activity, however, there was not so much fluctuation in cash prices on account of the fairly heavy receipts and the apathy shown by Western crushers. Latter had their urgent needs supplied and refrained from buying to some extent. The result was that the premium of 4c., which track seed had commanded over the December option dwindled away until on November 25 both were selling on the same basis.

The close of navigation found Duluth elevators practically cleaned out of flaxseed. Well over a million bushels were forwarded the last week of the season, but arrivals continued free and stocks on December 2 showed an increase over those of the preceding week. The heavy receipts naturally had a depressing effect on the market and kept buyers from taking hold except as they needed seed against sales of oil.

Throughout December considerable quantities of low grade, wet flaxseed came on the market and much of it had to be sold at a sharp discount. The fact that Duluth elevators were not equipped with apparatus for drying and conditioning flaxseed caused this kind of seed to become a drug on the market there, and much of it had to be reshipped to Minneapolis.

Unfavorable harvesting weather in the Argentine was reflected in American markets and caused an upward trend in prices late in the year. Conditions developed there very similar to those prevailing in the Northwest during September and October, dispelling the rosy outlook for a large exportable surplus. The close of the year found the market of a sluggish character. Inactivity in oil worked against free trading, while decreasing receipts lent strength to the situation.

PRICES.

The monthly range of closing prices for cash seed at Minneapolis during 1911 and 1910 was:—

	1911	1910
January	$2.46 @2.68	$2.02¾@2.27¾
February	2.63¾@2.70¾	2.16 @2.20¾
March	2.46 @2.67	2.18¼@2.34¾
April	2.48 @2.62	2.31¾@2.33¾
May	2.41 @2.61	1.98 @2.38¼
June	2.06 @2.35	1.89 @2.17
July	2.04 @2.18	2.10 @2.55
August	2.10 @2.50	2.41 @2.55
September	2.27 @2.65	2.45 @2.61
October	2.12 @2.46½	2.41¾@2.70
November	1.93 @2.17½	2.50 @2.70
December	1.95½@2.14	2.32½@2.55½

Comparative receipts and shipments of seed at Minneapolis for 1911, and the two previous years, in bushels:—

RECEIPTS.

	1911.	1910.	1909.
January	237,710	965,840	547,250
February	299,620	689,700	397,500
March	231,630	826,200	354,050
April	112,220	436,530	113,960
May	118,270	222,140	46,180
June	121,640	159,420	239,220
July	132,900	123,000	133,600
August	191,250	136,900	56,890
September	563,940	853,670	999,060
October	1,211,930	1,529,820	2,219,010
November	1,569,810	1,291,890	1,891,950
December	1,716,120	334,680	601,430
Totals	6,506,740	7,749,790	7,600,010

SHIPMENTS.

	1911.	1910.	1909.
January	30,470	69,360	40,310
February	29,760	93,140	103,740
March	34,590	111,870	91,840
April	36,960	153,430	41,350
May	73,420	148,710	35,750
June	19,640	88,050	28,580
July	3,700	32,500	85,270
August	8,590	24,600	6,950
September	106,010	174,950	120,530
October	223,040	206,410	583,950
November	514,500	295,070	578,120
December	212,040	47,590	85,640
Totals	1,088,520	1,446,380	1,802,030

For the previous nine years:—

	Receipts.	Shipments.
1908	12,596,710	2,609,590
1907	10,387,350	5,003,210
1906	10,209,060	6,166,560
1905	8,208,540	2,342,940
1904	8,513,040	3,559,450
1903	9,392,240	2,675,920
1902	8,166,400	2,839,970
1901	7,069,940	2,013,740
1900	5,693,410	4,005,750

Comparative receipts and shipments of seed at Duluth for 1911, and the two previous years, in bushels:—

RECEIPTS.

	1911.	1910.	1909.
January	64,000	171,667	145,000
February	56,271	41,865	81,000
March	36,778	58,694	135,000
April	18,432	122,420	119,000
May	17,664	148,195	57,000
June	15,335	57,469	105,000
July	37,709	179,112	361,000
August	14,341	50,936	49,000
September	281,417	379,082	673,000
October	1,104,985	822,743	3,185,000
November	3,015,418	1,442,279	4,489,000
December	1,258,979	367,850	651,000
Totals	5,919,329	3,842,312	10,049,000

SHIPMENTS.

	1911.	1910.	1909.
January	55,000	262,140	104,000
February	90,957	33,915	28,000
March	25,913	63,729	16,000
April	40,085	184,232	49,000
May	85,457	165,932	540,000
June	3,644	162,544	472,000
July	1,990	151,344	351,000
August	148,481	98,498	343,000
September	119,672	253,193	380,000
October	979,510	613,653	2,172,000
November	2,318,998	1,482,262	2,293,000
December	1,476,518	480,303	3,170,000
Totals	5,344,205	3,951,804	10,620,000

For the previous five years:—

	Receipts.	Shipments.
1908	14,853,885	16,646,286
1907	18,981,179	18,037,133
1906	21,784,625	21,932,310
1905	10,751,790	15,807,363
1904	15,327,003	13,332,221

Stocks of flaxseed (bushels) in public store at the close of each week in 1911, and on the corresponding days in 1910:—

1910.		Duluth.	Minneapolis.
Jan. 7,	1911	224,421	135,492
Jan. 8,	1910	235,078	541,874
Jan. 14,	1911	221,953	115,213
Jan. 15,	1910	210,503	532,032
Jan. 21,	1911	225,907	99,030
Jan. 22,	1910	225,175	546,879
Jan. 28,	1911	230,182	74,153
Jan. 29,	1910	228,289	559,551
Feb. 4,	1911	214,874	60,734
Feb. 5,	1910	235,657	567,000
Feb. 11,	1911	182,034	41,477
Feb. 12,	1910	243,687	581,869
Feb. 18,	1911	192,321	22,886
Feb. 19,	1910	237,450	568,865
Feb. 25,	1911	197,957	33,329
Feb. 26,	1910	234,148	572,475
Mar. 4,	1911	207,687	28,805
Mar. 5,	1910	239,244	575,044
Mar. 11,	1911	208,672	25,668
Mar. 12,	1910	237,506	573,169
Mar. 18,	1911	202,805	15,730
Mar. 19,	1910	234,631	587,134
Mar. 25,	1911	205,605	13,449
Mar. 26,	1910	242,000	586,234
April 1,	1911	210,740	14,558
April 2,	1910	226,273	597,218
April 8,	1911	202,441	14,338
April 9,	1910	254,004	595,257
April 15,	1911	206,276	14,494
April 16,	1910	281,486	558,509
April 22,	1911	200,386	10,244
April 23,	1910	305,833	557,351
April 29,	1911	189,087	9,807
April 30,	1910	169,100	518,307
May 6,	1911	178,967	12,745
May 7,	1910	125,990	473,884
May 13,	1911	140,277	9,653
May 14,	1910	66,630	396,167
May 20,	1911	120,998	5,512
May 21,	1910	76,024	336,133
May 27,	1911	120,690	3,652
May 28,	1910	103,588	263,412
June 3,	1911	121,917	3,609
June 4,	1910	34,580	231,068
June 10,	1911	120,995	6,551
June 11,	1910	50,915	168,606
June 17,	1911	124,702	4,742
June 18,	1910	24,450	110,294
June 24,	1911	125,206	9,983
June 25,	1910	39,798	53,200
July 1,	1911	120,689	4,457
July 2,	1910	54,100	54,516
July 8,	1911	134,444	9,276
July 9,	1910	100,843	44,335
July 15,	1911	144,536	5,802
July 16,	1910	44,456	32,855
July 22,	1911	154,810	6,187
July 23,	1910	40,111	34,835
July 29,	1911	102,995	4,171
July 30,	1910	74,413	3,551
Aug. 5,	1911	142,785	7,252
Aug. 6,	1910	27,801	5,713
Aug. 12,	1911	129,022	1,151
Aug. 13,	1910	43,955	8,444
Aug. 19,	1911	75,896	13,180
Aug. 20,	1910	19,864	4,409
Aug. 26,	1911	59,000	1,406
Aug. 27,	1910	25,609	6,575
Sept. 2,	1911	31,058	945
Sept. 3,	1910	29,282	8,550
Sept. 9,	1911	34,441	1,481
Sept. 10,	1910	29,401	5,423
Sept. 16,	1911	31,947	4,722
Sept. 17,	1910	40,431	10,060
Sept. 23,	1911	42,938	907
Sept. 24,	1910	103,062	27,533
Sept. 30,	1911	192,632	10,940
Oct. 1,	1910	131,619	27,526
Oct. 7,	1911	129,582	7,545
Oct. 8,	1910	178,372	47,799
Oct. 14,	1911	183,399	10,202
Oct. 15,	1910	175,518	47,557
Oct. 21,	1911	177,206	18,370
Oct. 22,	1910	205,312	76,670
Oct. 28,	1911	255,318	51,440
Oct. 29,	1910	373,571	106,388
Nov. 4,	1911	411,271	55,304
Nov. 5,	1910	289,705	166,458
Nov. 11,	1911	511,996	67,578
Nov. 12,	1910	561,740	177,928
Nov. 18,	1911	782,253	107,320
Nov. 19,	1910	499,933	195,914
Nov. 25,	1911	766,800	103,806
Nov. 26,	1910	458,453	188,865
Dec. 2,	1911	843,263	151,467
Dec. 3,	1910	259,498	189,460
Dec. 9,	1911	698,561	183,068
Dec. 10,	1910	279,885	195,758
Dec. 16,	1911	808,988	214,502
Dec. 17,	1910	270,551	192,134
Dec. 23,	1911	809,211	265,354
Dec. 24,	1910	231,206	183,491
Dec. 30,	1911	843,281	321,326
Dec. 31,	1910	224,088	157,803

Chicago.

During the year 1911 flaxseed prices at Chicago showed a range of 80½c., the low point being reached in October, when No. 1 Northwestern sold at $1.93, and the high point in February. During that month No. 1 Northwestern reached $2.74½. In its high and low points the market was more consistent during the year 1911 than in the year 1910. During the latter year the low point came during the month of June, when seed sold for $1.85 at a time when prices ordinarily are their highest, while the high point, $2.84, was reached in September, when prices generally attain a low point on account of the new seed just coming into market.

Receipts at Chicago fell off considerably during the year, a fact which is generally attributed to the gradually dwindling importance of this city as a market for seed and the general trade conditions that marked the year 1911 on account of the higher prices, which materially reduced the consumptive demand. The receipts for 1911 were 959,500 bushels, as compared with 1,387,800 bushels in 1910, a falling off of 428,300 bushels. Shipments, however, were smaller than those of 1910, being 165,600 for the year, as compared with 244,001 in 1910, a difference of 78,401.

While receipts are still fairly large at Chicago, although showing a heavy falling off in comparison with other years, merely nominal prices are quoted here as a rule, most of the seed used by local crushers being bought at Duluth or Minneapolis and shipped to Chicago.

Comparative receipts and shipments of seed at Chicago for 1910 and the two previous years:—

RECEIPTS.

	1911.	1910.	1909.
January	49,500	96,300	161,100
February	96,000	108,900	36,000
March	47,000	76,500	141,300
April	27,500	74,700	45,900
May	41,400	73,800	130,500
June	125,700	36,900	29,700
July	56,800	13,500	23,400
August	72,900	105,300	87,300
September	54,600	183,600	97,200
October	122,100	189,000	146,700
November	121,600	235,800	221,400
December	144,400	193,500	75,000
Totals	959,500	1,387,800	1,187,100

SHIPMENTS.

	1911.	1910.	1909.
January	11,300	10,420	8,498
February	12,700	14,381	2,000
March	6,000	14,450	7,567
April	7,500	18,949	3,308
May	11,200	11,450	1,031
June	11,650	12,000	642
July	15,850	17,300	16,723
August	2,400	11,200	37,239
September	16,000	49,000	45,227
October	52,000	25,300	22,252
November	12,600	30,500	.....
December	6,400	20,051	7,445
Totals	165,600	244,001	154,176

Monthly range of closing prices at Chicago for 1911, with comparisons for preceding year:—

NO. 1. NORTHWESTERN.

	1911	1910
January	$2.50 @2.70½	$2.02 @2.26
February	2.67 @2.74½	2.14 @2.22
March	2.47½@2.68	2.19½@2.35
April	2.51½@2.63½	2.30 @2.43½
May	2.53 @2.55	2.04½@2.42½
June	—@—	1.85 @2.15
July	2.23 @2.32	2.07½@2.55
August	2.35 @2.57	2.41 @2.57½
September	2.27 @2.69½	2.34 @2.84
October	2.13 @2.47	2.42 @2.70
November	1.93 @2.17	2.50 @2.73
December	1.94 @2.16	2.35½@2.57

NO. 1 SOUTHWESTERN.

	1911	1910
January	$2.37 @2.57½	$1.98 @2.23
February	2.54 @2.61½	2.11 @2.19
March	2.35½@2.55	2.16½@2.32
April	2.39½@2.51½	2.27 @2.40½
May	2.42 @2.42	2.01½@2.39½
June	—@—	1.82 @2.15
July	2.23 @2.23	2.04½@2.52
August	2.22 @2.42	2.38 @2.54½
September	2.14 @2.56½	2.50 @2.81
October	2.00 @2.34	2.39 @2.67
November	1.80 @2.04	2.47 @2.70
December	1.81 @2.03	2.32½@2.54

	Chicago.	Minneap.	Duluth.	Total.
1911	959,500	6,509,440	5,937,700	.....
1910	1,387,800	7,749,790	3,842,312	12,979,902
1909	1,187,100	7,600,010	9,976,000	18,763,110
1908	2,119,435	12,596,710	14,856,000	29,572,145
1907	1,851,422	10,387,350	18,981,179	31,219,951
1906	2,086,395	10,209,080	21,784,625	24,080,100
1905	2,899,300	8,170,240	10,852,000	21,912,540
1904	3,356,426	8,513,040	15,327,003	27,196,469

For a number of years there has been a dwindling market for flax in Chicago, a condition which is attributed principally to the fact that the flax raising area has left the older and gone to the newer sections of the country, coming into closer touch with other markets, such as Duluth and Minneapolis, than with the local market. This has been the natural drift going on for some time. During the last couple of years it has been noticeably so on account of short crops. Buyers have gone after the flax, not waiting for it to come to them. It makes a difference whether a crop is large or short, the trade finding it more necessary to closely look after its requirements in a short year than during a period of plenty.

While the receipts at Chicago were equal to 1,000 cars, only 44 cars were inspected. The reason so small a part was inspected here is because little of the flax came here for sale. It had been purchased by crushers, some, perhaps, by dealers. At any rate it was not intended to come on sale, so there was no reason for having it inspected. In 1910, 263 cars were inspected and in 1909, 363 cars. Shipments from this market were moderate, most of the seed received being wanted here.

LINSEED OIL IN CHICAGO

High prices of oil, as a result of the high cost of flaxseed, materially checked the demand for raw linseed oil, while many customers turned aside a substitute. There have been some concessions to induce business on account of the conservative buying of customers, but generally speaking, the range of prices by months, was as follows:—

January	87@95c.	July	80@82c.
February	94@95c.	August	80@85c.
March	88@94c.	September	85@90c.
April	87@90c.	October	79@87c.
May	86@88c.	November	63@79c.
June	84@86c.	December	63@69c.

Linseed oil cake ranged from $28 to $37 a ton during the year 1911, closing strong. During the early part of the year there was a shortage of cake on account of the small supplies of seed, but there was also a limited demand from Europe. The demand began to improve in August as a result of damages to fodder crops abroad. Conditions that followed became the strongest ever known to the trade and record prices were a result. At the close of the year cake was quoted at $37 for prompt shipment and $36 for February-March delivery. In 1911 there were exports of 408,373,315 pounds of cake, as compared with 545,042,012 pounds in 1910, and 472,126,997 pounds in 1909.

Conditions in the meal market were much the same as those governing the linseed oil cake market. Meal ranged from $29 to $38.50 per ton, f. o. b. Chicago.

THE FLAXSEED CROP.

The record breaking prices of 1910 and during the old crop season of 1911 had just such an effect as might be desired, that is, of causing increased acreage. Everything possible was done to encourage this, the producing sections being liberally supplied with instructions to the farmer on flax culture, and showing the profits to be made. The result desired was partially attained. Government final estimate placed the acreage at 2,757,000 bushels, as compared with 2,467,000 bushels in 1910. The yield per acre, though larger than a year ago, was kept down by hot, extremely dry weather during the greater part of the summer, some sections suffering, especially in this regard. The yield per acre was placed at 7.03 bushels, as against 5.1 busheis in 1910 and 19.9 from 1906 to 1910. As a total crop, however, there was, according to the government figures, a yield of 19,513,000 bushels, as against 12,718,000 bushels in 1910, and 19,513,000 bushels in 1909.

Formerly this country was a liberal exporter of flax, but short crops and increased home consumption have left little surplus during the last few years. For ten months in 1911 exports of only 909 bushels were reported; during the same period of 1910 there were 4,197 bushels, in 1909, 3.021 bushels, against 1,395,468 bushels in 1908 and 3,309,378 bushels in 1907. As against this there was a liberal gain in imports to make up the shortage. During ten months of the past year there were imported 6,844,706 bushels; in 1910 the imports were 6,405,983 bushels; in 1909, 922,632 bushels, and in 1908 they were but 34,587 bushels. Most of this flax, if not nearly all, came from Argentine, South America, where conditions were almost identical with those in this country as far as weather conditions during the growing season were concerned. This had a tendency to keep the prices on almost as high a basis as during the season of 1910-1911.

Such a thing as future or speculative trading never at any time appeared, and this used to be a large and important business here. Prices, although high during the old crop year, did not reach the top figures of 1910. On the new crop, under changed conditions, they declined materially and closed considerably below the figures of a year ago.

The following table gives the final estimates of the Department of Agriculture on the acreage and yield of flaxseed by States:—

1911.	Acreage.	Average yield.	Production.
North Dakota	1,200,000	7.0	9,129,000
South Dakota	697,000	5.3	3,217,000
Minnesota	400,000	8.0	3,200,000
Wisconsin	10,000	12.0	120,000
Iowa	16,000	8.0	128,000
Missouri	18,000	3.0	54,000
Nebraska	2,000	5.0	10,000
Oklahoma	1,000	3.0	3,000
Montana	425,000	7.7	3,272,000
Kansas	75,000	3.0	225,000
Colorado	3,000	7.0	21,000
United States	2,757,000	7.0	19,370,000

1910.	Acreage.	Average yield.	Production.
North Dakota	1,605,000	3.6	5,778,000
South Dakota	660,000	5.0	3,300,000
Minnesota	472,000	7.5	3,540,000
Wisconsin	18,000	10.0	180,000
Iowa	16,000	12.2	195,000
Missouri	20,000	8.4	168,000
Nebraska	10,000	8.0	80,000
Oklahoma	5,000	9.0	45,000
Montana	60,000	7.0	420,000
Kansas	50,000	8.2	410,000
Totals	2,916,000	5.2	12,718,000

1909	2,083,142	19,512,764
1908	2,679,000	25,805,000
1907	2,864,000	25,851,000
1906	2,506,000	25,576,000
1905	2,535,000	28,477,000
1904	2,284,000	23,400,000
1903	3,233,000	27,300,000
1902	3,740,000	29,285,000

LINSEED CAKE IN HOLLAND.

The year which has just come to an end has been a remarkable one in many respects, what with the exceptionally dry weather, the shortage of flaxseed in the United States, the general shortage of all feeding stuffs, the foot and mouth disease, the farmers had to contend against during the summer months, it is not surprising that the prices have been ruling very high all the year through.

The imports of linseed cake during 1911 have been far below those of 1910, while the demand even during the summer, for reasons explained above, has been very satisfactory. The year started with prices of 99@99½ florins, which during January and February went gradually down to 97@96 florins; in March the situation improved again and prices of 99@102 florins were obtainable. In April the imports of linseed cake crushed from domestic flax were very light, while those of linseed cake crushed from Plate flaxseed increased. The prices paid for the latter were 98@100 florins. In May, as is generally the case, prices went down again, viz., to 98@97 florins for domestic and 95@94 florins for Plate cake. These prices were practically maintained all during June. In July they showed an upward tendency, 99@100 florins being paid for domestic, 98@99 florins for Plate and 96 florins for Calcutta cake. In August the arrivals became so small that high prices, considering the time of the year had to be paid, viz., early in the month 106 florins for domestic and 103 florins for Calcutta cake. These prices in the course of said month ran up to 110@109 florins, respectively. In September the market was still higher, 123@124 florins being obtainable for domestic cake. The supplies during September and October remained exceptionally small, consequently famine prices could be made. In other years the trade as a rule partly fills its requirements for the winter campaign during the summer months when prices rule low, but this year it has had no chance of doing so, consequently there have been no stocks whatever in the interior. The natural result has been that prices have been at an exceptionally high level all through the winter and are not likely to drop to any considerable extent during this campaign, although farmers have predicted all along that the demand would be materially reduced. So far the supplies have not exceeded the demand and it is only, if the shipments should really become very much heavier, that one may expect to see decided lowering in the prices.

NEW YORK NAVAL STORES MARKET.

Spirits of Turpentine.

The highest price since the Civil War was recorded for turpentine during the past year, but after establishing this high point the tendency of the market was downward, with scarcely any interruption in the declining movement of prices. The year opened at 80½c. a gallon for spirits, with demand light and transactions confined chiefly to current wants. Stocks, however, appeared to be well under control and a moderate inquiry was sufficient to propel values to 87c. per gallon by the end of the month. February brought no improvement in the consuming inquiry, although there was a pronounced scarcity of offerings both in the local market and at Savannah. The advance in February extended from 87c. to 91½c. per gallon. March proved to be the most interesting month of the year, in as much as the scarcity of offerings and the forced buying by dealers to cover contracts advanced the price to $1.12 per gallon. The abnormal high quotation naturally tended to restrict further buying except for actual necessities. The approach of warmer weather found slightly freer offerings on spot and by the middle of April it became apparent that the backbone of the bull campaign was broken. Once on its downward course, the market declined as rapidly as it had previously advanced. The depreciation in April was 36c. a gallon, or from $1.12 to 76c. May, June and July witnessed a further lowering of quotations, with buyers extremely cautious and trading almost entirely of hand-to-mouth character. The scarcity of labor in the South occasioned some little difficulty in May, but in June receipts were free and accumulations were noted at primary points. In July the paint and varnish makers bought more freely and this caused a temporary check to the downward course of prices. During August export buying was of more pronounced character and the effect was reflected in the slight upward movement of prices. In September, the buying power seemed to have spent its force and the trend of values during the remainder of the year was downward without important interruption. The lowest point recorded was in November, when sales were effected at 48c. a gallon. Early in October, prominent interests bid 48½c. a gallon for all stocks at Savannah, but holders refused to accept the proposition. The closing quotation at the end of December was 54c.

The following table shows the highest and lowest prices of spirits of turpentine at New York for each month from January, 1908, to December, 1911, inclusive. The figures are based on the closing quotations each successive week:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan	57	43½	45½	41½	63½	59½	87	80½
Feb	55½	50½	45	43½	63	62½	91½	87
March	58	52	42½	40	64	63	1.12	91
April	48	48	43	40	63½	62	1.12	76
May	48	44	42½	40	65	62½	74	61½
June	44	42	47½	41½	62½	59	60	54
July	43	41	50¼	47	72½	63½	57	53
Aug	41	39	60	51	73	71	57	52
Sept	40	39	61	59	79½	75	55½	51½
Oct	41	38½	62	60	81	77½	53½	50
Nov	43	40	60½	58½	81	78½	50	48
Dec	43	41½	58½	56½	80½	78	54	52

Rosins (Common Strained).

The year's movement of rosin prices was decidedly irregular and was similar to the course pursued by turpentine. The constant varying of quotations had a tendency to restrict future buying and increase spot trading. At the beginning of the year, the market was almost bare of stocks, owing to heavy purchases late in 1910. Unfavorable weather conditions had also caused more or less difficulty in the movement of supplies at primary sources, and holders were therefore conservative in their offerings. All through the winter and early spring months the scarcity of available stocks was pronounced and the trend of prices was steadily upward. Fluctuations extended from $6.50 per unit of 280 pounds in January to $8.65 in April. The latter price proved to be the highest point for the year, and from the beginning of May until late in August the price movement was gradually downward, and the feeling was decidedly uncertain. The culmination of the decline was brought about in August after the low point of $5.60 had been established. In September an improved inquiry developed from the paper makers, also the soap and varnish trades and considerable business was placed for their accounts. The effect of this buying power had a steadying influence and prices rallied to $6.57½c. During the remainder of the year the undertone of the market was firm, with the tendency upward. The high points for October and November were $6.90, while in December as high as $7.40 was paid for immediate delivery. The other grades of rosin moved in sympathy with the common sort, although in the extreme high grades fluctuations were not as pronounced.

In the following table is given the lowest and highest prices of common strained rosin in the local market for each month during the past year. Prices are based on the closing quotation each week and represent the unit of 280 pounds.

	L.	H.
January	$6.50	$7.00
February	7.25	7.65
March	7.65	8.55
April	7.90	8.65
May	6.95	7.50
June	6.50	6.95
July	5.85	6.40
August	5.60	6.40
September	6.55	6.57½
October	6.55	6.90
November	6.50	6.90
December	6.50	7.40

Pitch.

Trading in this item was not along elaborate lines during the past year, and the movement in the local market was irregular, with only occasional intervals of activity. At the beginning of the year $4.50 was quoted per barrel, but late in January arrivals became freer, and while the former price was named, a firm bid at a concession would probably have been acceptable. Prices in February were nominally unchanged, owing to slack trade, but in March $4.25 was quoted. April found a slightly steadier market, owing to moderate inquiries and were made as high as $4.50. The approach of warmer weather appeared to increase the dullness, and in May competition caused a reaction to $3.90. All through the summer months business was quiet and the market displayed a heavy undertone. The lowest prices were recorded in July and August, when sales were effected at $3.75. Throughout the fall months and December a firmer feeling prevailed, owing to a better run of small inquiries. In September, the market was advanced to $4@4.50, and these quotations remained without change over the year.

The following table shows the highest and lowest prices of pitch in the New York market, for each month from January, 1908, to December, 1911 inclusive:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan	3.25	3.00	3.10	3.00	3.40	3.00	4.50	4.50
Feb	3.25	3.15	3.10	3.00	3.40	3.25	4.50	4.50
March	3.25	3.15	3.10	3.00	3.40	3.25	4.25	4.25
April	3.25	3.25	3.00	3.00	3.40	3.25	4.50	4.25
May	3.25	3.25	3.00	3.00	3.40	3.25	4.50	4.25
June	3.15	3.00	3.00	3.00	3.25	3.15	3.90	3.90
July	3.15	3.15	3.00	3.00	3.75	3.15	3.90	3.75
Aug	3.10	3.00	3.00	3.00	4.00	3.75	4.00	3.75
Sept	3.10	3.00	3.00	3.00	4.50	3.75	4.50	4.00
Oct	3.10	3.00	3.10	3.00	4.50	4.25	4.50	4.00
Nov	3.00	3.00	3.10	3.00	4.25	4.25	4.50	4.00
Dec	3.10	3.00	3.10	3.00	4.25	4.25	4.50	4.00

Tar.

Like pitch, trading in tar continued along limited lines and aggregate business for the year involved comparatively light proportions. The highest prices for the item were established in January when $7.50 per barrel was paid for kiln burned and $7.25 for retort. While displaying a firm tone, throughout February, the market weakened in March and the drift of prices was downward during the remainder of the year. In September, retort commanded 5.50c. and kiln burned $5.75. These prices remained stationary during the remainder of the fall and in December.

The following table shows the highest and lowest prices in the New York market for kiln-burned tar in oil barrels, of 50 gallons, for each month from January 1908, to December, 1911, inclusive:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan	5.25	4.75	5.50	5.00	6.00	5.75	7.25	7.25
Feb	5.50	4.50	5.50	5.00	6.00	6.00	7.25	6.75
March	5.50	4.50	5.25	4.75	6.00	6.00	7.00	6.75
April	6.00	4.50	5.00	5.00	6.00	6.00	7.00	6.75
May	6.00	4.50	5.00	5.00	6.00	6.00	6.50	6.00
June	5.50	5.00	5.50	4.75	6.25	6.00	6.00	6.00
July	5.50	4.90	5.00	4.75	6.75	6.25	6.00	5.75
Aug	5.50	4.90	5.75	4.75	7.00	6.75	6.50	6.00
Sept	5.50	4.90	6.00	5.75	7.50	7.25	5.75	5.75
Oct	6.00	5.00	6.00	5.75	7.50	7.50	6.00	5.75
Nov	6.00	5.50	6.00	5.75	7.50	7.50	5.75	5.75
Dec	5.50	5.00	6.00	5.75	7.50	7.50	5.75	5.75

SAVANNAH NAVAL STORES MARKET.

The year 1911 will long be remembered in the naval stores trade. There have been other years of wide price changes, but nothing before that could be compared with last year's experiences.

The old naval stores year went out on March 31, 1911, with prices far above all previous records. The extraordinary price of $1.07 had been quoted for turpentine just a few days before the end of the season and the close was only a few cents below the top.

The trade entered upon the new season in a very hopeful spirit. Of course, nobody expected that turpentine could remain long at a dollar a gallon, more especially as it was generally recognized that a strenuous effort would be made to strain the production, but it was thought that good prices would be maintained for the new year. However, the opening of the new season was the signal for a reverse movement in the market. The first transactions to take place were at 90c., and with only occasional minor fluctuations, the decline continued until the price had fallen to 44¼c., the lowest for the year, on November 20.

The decline was attributed to the larger receipts and by some also to the employment of substitutes. But while it was agreed that there had been an increase in the production, it was pointed out that the heavy increase in the receipts at Savannah was due in a large measure to the closing of some of the Gulf ports, and a diversion of a good part of the product in this direction, and the higher prices obtainable at Savannah, which tended to concentrate the crop at this port.

For the first part of the year under review, January 1 to March 31, the run of prices was much higher than the year before for the same period. Prices continued to run above last year for a month or two, but in May they dropped below, and have since remained materially under those of last year.

It is claimed that the producers of turpentine and rosin, commonly known as naval stores, are making the second largest crop in the history of the product. Taking the figure for the year, it is shown that the average net price of the combined product at Savannah during the year 1911 is greater than any previous year. The average price of spirits of turpentine, per barrel, net to the producer for the year has been $28.20, as against $30.52 in 1910, $20.68 in 1909, $18.78 in 1908, $27 in 1907, and $28.54 in 1906.

On a basis of three and two-thirds barrels of rosin to each barrel of spirits of turpentine, it is figured out that the producer received for his combined product, turpentine and rosin, delivered at this port:—For 1911, $66.69; for 1910, $60.95; for 1909, $42.09; for 1908, $38.07; for 1907, $52.89, and for 1906, $53.33.

It is pointed out that the increase shown in the value of rosin was more than offset by the decline in the price of turpentine. The price for the combined product as shown by the figures is said to be the best price the producer has ever received at port for his product. This doesn't mean that the results at the stills have been better than in any previous years, for the reason that the producers have encountered troubles with their labor. In addition to the labor difficulties the cost of time is ever increasing, both of which problems tend to reduce the net profits of the producer.

THE YEAR IN SPIRITS.

Decided strength set in with the new year. The previously unknown record of 80 cents was made on January 10, and with moderate fluctuations the market tended upward until toward the end of the month, the price was up to 84 cents. Stocks everywhere, and especially in Savannah, had been reduced to a low level and all available supplies were eagerly taken at constantly advancing prices. This continued into February, and while there were frequent minor reactions, the tendency ruled upward and before the end of February the market had mounted to 88 cents.

With March the strength still further increased. On March 9 the price reached 90c., and at this time the trade began to think that the quotation might reach $1. There was considerable hesitation about the advance until 95c. was reached, but the trade had been alarmed over the almost complete depletion of stocks and the unpromising outlook for the new crop, owing to the protracted drought checking the sap. On March 15 95c. was reached, and then the price went by daily leaps until the dollar mark was reached and passed amid great excitement on March 18, the price that day reaching $1.01. After crossing the dollar mark the market continued to advance rapidly until on March 25 the price reached $1.07. This was officially the high point, although on March 27 a sale of 25 casks was reported at $1.07½. This was not enough to establish a quotation, and on the same day the price reacted to $1.04. A rally to $1.05 ensued, but at the close there was another relapse to $1.02, at which the market closed.

Late in March receipts were a little larger, representing the beginning of the new crop. The closing price as compared with a year ago showed a gain of 42½c.

With the opening of the new season in April the market was in a waiting attitude. Sales of the crop had been made from 80c. to 90c., the general idea being that this represented a fair range for the season. No transactions were reported until April 10, when there were light sales at 90c., a drop of 12c. from the last previous sale. The next day the price slumped to 85c., the next day to 80c. and the next day to 76c. The market was cleaned up on this basis and there was a recovery by April 25 to 74½c., with the month closing at 74c.

Weakness was renewed early in May and by the 5th of the month the price had fallen to 62½c. By May 11 there was a reaction to 65¼c., but when the decline started in again and continued almost without reaction until on May 3 the price was 62½c., with the month closing at 52¾c.

There was a moderate recovery early in June to 54¼c., but pressure continued, and by June 12 the market was down to 50½c. After this the market ruled a little steadier, reacting to 53¾c. before the end of the month, and closing at 52½c.

During July no material support came. With large receipts the demand became indifferent. After declining to 50c. early the price recovered to 51½c., weakened to 49¼c., reacted to 51¾c. and ended the month at 49c.

During August the market ruled somewhat steadier. Some weakness developed at times in the heavier movement and low thus far was reached early in the month when the price reached 48¼c. An irregular reaction to 53½c. followed, and then a partial relapse, but with the close of the month fairly steady at 51¼c., as against 70¾c. a year ago.

The month of September opened with the market in a slightly better condition, and this was substantiated by an early rise in the price to 51¾c. to 52c., but the price was soon to fall backward and continued the remainder of the month between 50c. and 51c., closing the month at 50¼c.

October opened in a decidedly weaker condition and the price soon began to range downward. With a few exceptions the quotation fell day by day, until the price was quoted 45½@45¾c. at the close of the month. This month was the lowest price so far.

The first of November saw a continued weakness from the previous month, but after a day or two the market strengthened and sales were made on a higher level. When the price had reached 46½c. the market again became much weaker, the price dropping to the lowest record for the year, 44¼c. on November 20. By the 22d of the month the price began to recover slowly and closed the month at 45¾@46c.

December, the closing month of the year, saw a more pronounced falling off in receipts. The price steadily worked its way upward by the 12th, reaching 50c. Here a dullness set in, small transactions taking place. The price fluctuated until the close of the month, when 50¼c. was the quotation.

This closes the calendar year 1911, spirits of turpentine having suffered a net decline of 26¾c. per gallon, or about $13.50 per cask from the closing quotation of the year before, when the price was quoted at 77c. per gallon. The total year's receipts were 206,506 casks. As compared with receipts of 166,013 casks for the previous year there was an increase in supplies of 40,493 casks.

Highest, lowest and average price of spirits of turpentine for each month during the year 1911, as compared with the same period of 1910:—

	1911			1910		
	High.	Low.	Avg.	High.	Low.	Avg.
Jan	84	77	.8125	60½	56	.5913
Feb	88	83¾	.8689	60	59	.5951
March	107	87¾	.9669	60¾	58½	.6004
April	90	70	.7568	60½	58½	.5983
May	70	52½	.6112	61¾	57¾	.5979
June	54¼	50½	.5262	59¼	53¼	.5762
July	51¾	49	.5021	70½	59¾	.6617

Aug.....	53½	48¼	.5101	71	67	.6894
Sept.....	51⅜	50	.5075	73½	70	.7272
Oct.....	50⅛	45⅝	.4790	77¾	72⅛	.7530
Nov.....	46½	44¼	.4501	77⅞	74½	.7593
Dec.....	50¼	46⅝	.4889	77	74⅛	.6585
Year....	107	44¼	.0233	77¾	55¼	.4641

ROSINS.—At the close of the old naval stores year rosins were also bringing remarkable prices, all grades being above $8 per 280 pounds, or about $15 for the regular package. However, while a great deal below the high figures above mentioned for the end of the old season, have kept well above last year, although the receipts have increased fully as much as those of spirits. The high prices throughout the year for rosin and the increase in quantity have combined to hold up the total value of products for the year.

The average the producer has received for rosin during the year per round barrel has been $10.47, against $8.30 in 1910, $5.84 in 1909, $5.26 in 108, $7.06 in 1907 and $6.76 in 1906.

At the opening of the year under review the market was strong with prices as follows:—W. W., $7.35; W. G., $7.25; N, $7@7.20; M, $7@7.10; K, $6.70; I, $6.10; H, $5.95@6.10; G, $5.92½@6.10; F, $5.90@6.07½; E, $5.87½@6.05; D, $5.85@6.05; B, $5.82½@6.05.

Prices worked upward during January and by the middle of the month the top grades reached $8 for the first time. There was also some tendency toward narrowing differences. Early in February the lower grades developed more strength, and by the middle of the month the extremes were $8.10 and $7.12½.

For some weeks prices remained stationary, and it was not until toward the end of the first week in March that the advance was resumed. Then prices for the medium and lower grades strengthened day by day until differences were well-nigh obliterated. On March 16 the bottom grades sold as high as $8, while the top grade was only 35c. higher. Offerings were small, and a barrel of rosin was a barrel of rosin, almost regardless of grade.

During the closing weeks of the season the market continued very firm and prices continued making new high records. Early arrivals of the new crop were reflected in an increase in the proportions of pales. The highest of the year was made in the closing day and the advance in the lower grades for March exceeded $1 per barrel. Prices at the close of the old season were:—W. W., W. G., N, $8.57½; M, $8.47½; K and I, $8.50; H, $8.42½; G and F, $8.40; E, $8.32½; D, $8.22½ and B, $8.10.

The market held firm early in April, but weakness set in on April 9. This weakness became more decided early in May, although the high grades held up relatively better than the medium and lower grades, with the result of materially widening the grade differences. This tendency continued in June. High grades held up fairly well, while the other grades steadily declined. The same tendency continued in July, the weakness being more pronounced in E and below. Differences continued to widen out until they amounted to nearly $2 a barrel between the highest and lowest grades.

Early in August there was further weakness, the top grade falling below $7, and the bottom grade close to $5. The market then developed a firmer tone, especially for the lower grades, which recovered about $1 from the lowest with the result of again narrowing the differences between the extremes. Late in August the market became firmer for the lower grades, but closed the month with a falling off in prices. Toward the middle of September prices again ranged higher for all grades and during the remainder of the month the lowest grades kept well above $6, while the higher grades lost some in price.

October set in with a steady advance in prices for the entire line, the extremes continuing about $1.10 apart, but at the end of the month the medium and lower grades suffered sharp declines which continued into November, B reaching as low as $5.92½, meanwhile the prices of pales constantly moving upward, making the difference in price of the extreme grades about $1.75 at the end of the month.

December, the closing month of the year, started with a rapid upward movement in the prices of medium and common rosins, K. reaching $7 before the middle of the month and at the end of the month $7 was paid for the lowest grade. Pales remained almost stationary during the month of December, there being very little doing as the supply of these grades was almost nothing. Water white and window glass rosin maintained their same values, $7.75 and $7.50, respectively, during the entire month of December.

The year 1911 closed with the prices of rosin considerably higher than those at the opening of the year, advances being as follows:—W. W., 40c.; W. G., 25c.; N, 40c.; M, 40c.; K, 65c.; I, $1.10; H, $1.05; G, $1.17½; F, $1.17½; E, $1.15; D, $1.02½, and B, $1.10.

The total receipts of rosin at Savannah for the year 1911 were 722,135 barrels, as against 608.847 barrels for 1910, an increase of 113,288 barrels over the previous year.

The following were the closing prices:—W. W., $7.75; W. G., $7.50; N, $7.40; M, $7.40; K, $7.35; I, $7.20; H, $7.10@7.12½; G, $7.10@7.12½; F, $7.07½@7.10; E, $7.02½@7.05; D, $6.97½@7; B, $6.92½@7.

The following is the highest and lowest prices of rosin for each month as compared with the same month of the previous year:—

JANUARY.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$8.05	$7.35	$7.30	$6.75
W. G....	8.00	7.30	7.05	6.25
N	7.85	7.00	6.65	6.15
M	7.60	7.00	6.25	5.90
K	7.10	6.60	5.70	5.65
I	6.80	6.10	4.70	4.55
H	6.75	6.10	4.47½	4.22½
G	6.75	6.00	4.40	4.17½
F	6.70	5.97½	4.35	4.15
E	6.70	5.95	4.30	4.12½
D	6.65	5.92½	4.27½	4.02½
B	6.65	5.95	4.25	4.00

FEBRUARY.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$8.10	$8.05	$7.30	$6.90
W. G....	8.05	8.00	7.05	6.75
N	8.00	7.90	6.65	6.50
M	7.95	7.80	6.35	6.30
K	7.80	7.30	5.80	5.70
I	7.40	6.90	4.80	4.70
H	7.40	6.80	4.67½	4.50
G	7.25	6.77½	4.62½	4.37½
F	7.20	6.55	4.62½	4.35
E	7.17½	6.72½	4.45	4.25
D	7.15	6.70	4.40	4.22½
B	7.12½	6.70	4.27½	4.20

MARCH.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$8.57½	$8.10	$7.05	$6.90
W. G....	8.57½	8.05	6.95	6.75
N	8.57½	8.00	6.70	6.55
M	8.47½	7.95	6.45	6.35
K	8.50	7.90	5.95	5.80
I	8.50	7.60	4.95	4.80
H	8.45	7.40	4.90	4.60
G	8.40	7.25	4.85	4.55
F	8.40	7.20	4.85	4.50
E	8.40	7.17½	4.60	4.40
D	8.25	7.15	4.42½	4.30
B	8.15	7.12½	4.25	4.20

APRIL.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$8.62½	$7.72½	$7.05	$5.90
W. G....	8.62½	7.72½	6.95	5.75
N	8.62½	7.70	6.75	5.40
M	8.55	7.70	6.55	5.20
K	8.55	7.70	6.30	5.15
I	8.55	7.67½	5.40	5.00
H	8.47½	7.65	5.25	4.95
G	8.45	7.62½	5.10	4.80
F	8.45	7.60	6.07½	4.75
F	8.37½	7.57½	4.75	4.55
D	8.27½	7.50	4.42½	4.20
B	8.15	7.40	4.30	3.95

MAY.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$7.75	$7.30	$6.15	$5.55
W. G....	7.70	7.25	6.00	5.70
N	7.70	7.20	5.75	5.40
M	7.65	7.05	5.60	5.20
K	7.65	7.00	5.20	5.00
I	7.65	6.95	5.10	4.80
H	7.60	6.90	5.05	4.70
G	7.60	6.85	4.97½	4.60
F	7.60	6.80	4.92½	4.50
E	7.50	6.75	4.85	4.40
D	7.50	6.67½	4.55	4.15
B	7.50	6.37½	4.30	3.75

JUNE.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$7.40	$7.20	$6.40	$5.90
W. G....	7.35	7.00	6.25	5.70
N	7.25	7.00	6.00	5.40
M	7.10	6.85	5.55	5.20
K	7.07½	6.55	5.40	5.15
I	7.05	6.50	5.35	5.00
H	7.10	6.50	5.35	5.00
G	7.10	6.50	5.35	4.90
F	7.05	6.45	5.35	4.85
E	6.95	6.40	5.35	4.75
D	6.92½	6.20	5.20	4.30
B	6.50	5.05	5.05	4.00

JULY.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$7.40	$6.90	$7.35	$5.90
W. G....	7.30	6.95	7.30	5.70
N	7.20	6.55	7.25	5.45
M	6.90	6.40	7.00	5.40
K	6.70	6.40	6.35	5.40
I	6.60	6.35	6.20	5.37½
H	6.60	6.35	6.17½	5.32½
G	6.55	6.30	6.12½	5.30
F	6.55	6.30	6.05	5.30
E	6.55	5.75	5.92½	5.27½
D	6.25	5.50	5.90	5.10
B	5.75	5.10	5.90	5.00

AUGUST.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$7.50	$6.90	$7.65	$6.20
W. G....	7.30	6.75	7.10	6.10
N	6.80	6.45	6.80	5.70
M	6.70	6.30	6.60	5.65
K	6.67½	6.30	6.20	5.60
I	6.67½	6.30	6.17½	5.50
H	6.67½	6.30	6.15	5.40
G	6.67½	6.30	6.10	5.35
F	6.67½	6.30	6.05	5.30
E	6.55	5.55	5.95	5.25
D	6.30	5.35	5.85	5.10
B	6.07½	5.05	5.75	5.05

SEPTEMBER.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$7.45	$7.20	$7.15	$6.55
W. G....	7.22½	6.95	7.10	6.50
N	6.90	6.65	7.00	6.45
M	6.70	6.40	6.87½	6.30
K	6.67½	6.35	6.77½	6.20
I	6.65	6.32½	6.67½	6.11¼
H	6.62½	6.32½	6.67½	6.12½
G	6.62½	6.32½	6.62½	6.07½
F	6.62½	6.32½	6.57½	6.06¼
E	6.55	6.22½	6.42½	6.00
D	6.30	6.17½	6.36¾	5.87½
B	6.22½	5.95	6.33¾	5.80

OCTOBER.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$7.50	$7.25	$7.15	$7.00
W. G....	7.20	7.00	7.00	6.60
N	6.81¼	6.60	6.90	6.45
M	6.76¼	6.40	6.85	6.30
K	6.65	6.40	6.65	6.20
I	6.65	6.40	6.55	5.97½
H	6.65	6.40	6.50	5.95
G	6.65	6.38¾	6.45	5.87½
F	6.63¾	6.40	6.40	5.85
E	6.56¼	6.35	6.30	5.82½
D	6.50	6.28¾	6.25	5.80
B	6.45	6.25	6.25	5.75

NOVEMBER.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$7.75	$7.50	$7.65	$7.15
W. G....	7.50	7.20	7.55	7.00
N	6.80	6.65	7.20	6.70
M	6.60	6.50	6.75	6.50
K	6.50	6.30	6.60	6.30
I	6.50	6.15	6.20	5.90
H	6.50	6.15	6.12½	5.75
G	6.47½	6.13¾	6.08¾	5.80
F	6.47½	6.12½	6.03¾	5.80
E	6.46¼	6.07½	5.98¾	5.65
D	6.35	6.02½	5.95	5.60
B	6.30	5.95	5.95	5.55

DECEMBER.

Grade.	1911 High.	1911 Low.	1910 High.	1910 Low.
W. W....	$7.75	$7.75	$7.75	$7.20
W. G....	7.50	7.50	7.65	7.10
N	7.40	6.85	7.50	7.00
M	7.40	6.65	7.20	6.85
K	7.35	6.47½	6.75	6.60
I	7.20	6.28½	6.40	5.97½
H	7.11¼	6.25	6.02½	5.73¾
G	7.11¼	6.25	6.01¼	5.70
F	7.08¾	6.25	5.98¾	5.66¼
E	7.03¾	6.20	5.96¼	5.63¾
D	6.98¾	6.15	5.95	5.61¼
B	6.96¼	6.00	5.53¾	5.58¾

Comparative statement of stocks at the first of each month, receipts, shipments and stocks remaining on hand:—

JANUARY.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stocks on 1st...	16,199	84,076	36,036	152,362
Receipts	5,739	43,677	5,179	43,099
To agree with stock	682	8,706	....	....
Total supply..	22,620	136,459	41,215	195,452
Shipments	14,951	54,767	14,180	141,956
Stock remaining	7,669	81,692	37,035	141,956

FEBRUARY.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	7,669	81,692	27,035	141,956
Receipts	3,639	21,775	2,420	24,571
To agree with stock	1,514	....	....	....
Total supply..	12,822	103,467	29,455	166,527
Shipments	10,447	48,403	10,200	42,084
Stock remaining	2,375	55,064	19,255	124,443

MARCH.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	2,375	55,064	19,255	124,443
Receipts	4,632	19,371	2,119	22,286
To agree with stock	....	4,334	....	....
Total supply..	7,007	78,769	21,374	146,729
Shipments	5,433	48,651	12,900	62,498
Stock remaining	1,574	30,118	8,474	84,231

APRIL.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	1,574	30,118	8,474	84,231
Receipts	12,556	36,360	9,217	28,697
Total supply..	14,130	66,478	17,691	112,928
Shipments	6,553	22,833	13,476	53,432
Stock remaining	7,577	43,645	4,215	59,496

MAY.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	7,577	43,645	4,215	50,496
Receipts	25,506	70,467	17,606	47,747
Total supply..	33,083	114,112	21,821	107,243
Shipments	17,233	52,158	15,530	62,127
Stock remaining	15,850	61,954	6,291	45,116

JUNE.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	15,850	61,954	6,291	45,116
Receipts	29,758	84,548	21,678	59,779
Total supply..	45,608	146,502	27,969	104,895
Shipments	21,546	51,543	20,072	52,881
Stock remaining	24,062	94,959	7,897	52,014

JULY.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	24,062	94,959	7,897	51,914
Receipts	30,189	92,610	22,830	66,585
Total supply..	54,251	187,569	30,727	118,499
Shipments	27,510	72,424	17,838	60,230
Stock remaining	26,741	115,145	12,889	58,269

AUGUST.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	26,741	115,145	12,889	58,269
Receipts	25,259	79,162	22,067	64,865
Total supply..	52,000	194,307	34,956	123,134
Shipments	17,652	83,237	21,737	67,307
Stock remaining	34,348	111,070	13,219	67,307

SEPTEMBER.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	34,348	111,070	13,219	67,307
Receipts	19,794	62,082	18,759	61,761
Total supply..	54,142	173,152	31,978	129,068
Shipments	16,122	94,271	14,909	59,678
Stock remaining	38,020	78,881	17,069	69,390

OCTOBER.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	38,020	78,881	17,069	69,390
Receipts	17,237	59,790	13,700	50,752
Total supply..	55,257	138,680	30,769	120,142
Shipments	19,565	56,490	10,411	45,594
Stock remaining	35,692	82,190	20,358	74,548

NOVEMBER.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	35,692	82,190	20,358	74,548
Receipts	17,022	75,010	16,920	67,909
Total supply..	52,714	157,200	37,278	142,467
Shipments	14,441	45,597	20,690	56,483
Stock remaining	38,273	111,603	16,588	85,974

DECEMBER.

	Spirits.	Rosin.	Same time last year. Spirits.	Same time last year. Rosin.
Stock on 1st...	38,273	111,603	16,588	85,974
Receipts	14,543	68,568	14,270	70,805
Total supply..	52,816	180,171	30,858	156,779
Shipments	18,850	46,414	14,650	72,703
Stock remaining	33,966	133,757	16,190	84,071

LONDON NAVAL STORES MARKET.

Turpentine.

The high prices for turpentine registered in March, 1911, put those of the year 1910 quite into the shade.

The same remark applies to common rosin.

The year 1910 closed with turpentine at its highest— 56d.—ex wharf, London.

At the close of 1911 the price was not quite at its lowest, although not far above it, viz., 37s. 4½d., and the market was dull and depressed, whereas a year before it was buoyant and excited.

The highest price in 1911 was 74d. 3s., paid in March, the lowest was 33d. 9s., accepted in November—a difference of 40d. 6s. per cwt. in 8 months.

The poor crops of 1909 and 1910 and the almost uninterrupted rise from 26d. 6s. in April, 1909, to 74d. 3s. in March, 1911, naturally stimulated production and curtailed consumption last year. The consumers of turpentine bitterly resented the undue inflation of prices of last spring. They turned to the use of substitutes, wood spirit and benzine under various aliases; tney also gave a warm welcome to the high class wood and stump turpentines now made on a large scale and by scientific methods in the United States.

This was the situation at the beginning of what has proved to be the second largest crop on record, and it explains the tremendous fall in prices shown above.

The following table gives the highest and lowest prices for turpentine each month in London, from 1908 to 1911, both inclusive:—

	1908 s. d.	1908 s. d.	1909 s. d.	1909 s. d.
January	32 0	40 0	28 9	30 9
February	36 9	38 6	27 3	30 0
March	35 9	40 3	26 0	27 0
April	33 6	37 6	25 6	28 0
May	31 9	33 9	26 6	29 3
June	29 0	33 0	28 0	32 9
July	28 6	31 3	33 9	36 0
August	27 0	29 3	36 0	41 0
September ...	26 3	27 3	39 9	43 3
October	25 9	28 9	40 6	42 9
November ...	28 6	29 3	39 9	41 0
December ..	28 9	29 6	38 6	40 9

	1910 s. d.	1910 s. d.	1911 s. d.	1911 s. d.
January	40 6	43 3	56 0	57 9
February	41 0	42 9	57 9	63 6
March	41 6	42 9	63 3	74 3
April	42 0	44 3	62 0	71 0
May	42 9	44 9	46 0	64 0
June	42 6	44 9	43 0	48 0
July	45 0	50 6	37 6	39 0
August	48 9	51 6	36 6	39 9
September ...	51 3	54 6	38 0	39 4½
October	53 3	56 0	35 0	38 3
November ...	54 0	55 9	33 9	35 9
December	53 3	56 0	35 9	37 6

THE AVERAGE PRICE OF AMERICAN TURPENTINE IN LONDON.

(The average for 1891-1900 was 25s. 2d.; for 1901-1910 was 39s. 4d.; for 20 years, 1891-1910 32s. 3d.)

	s. d.		s. d.
1905.....	45 7	1909.....	33 11
1906.....	47 3	1910.....	47 8
1907.....	44 3	1911.....	47 9
1908.....	31 9		

THE TOTAL EXPORTS FROM FRANCE WERE (IN TONS OF 1,000 KILOS).

1905.....	12,214	1909.....	9,220
1906.....	12,922	1910.....	10,954
1907.....	9,754	1911.....	10,210
1908.....	9,212		

TOTAL EXPORTS FROM UNITED STATES.

N. B.—The American crop year begins April 1 and ends March 31.

[320 American gallons, calculated as one English ton equals 1,016 kilos.]

1905-1906.....	49,482
1906-1907.....	47,181
1907-1908.....	54,800
1908-1909.....	61,093
1909-1910.....	46,747
1910-1911.....	44,835
1911 (April-Oct., 7 months).....	37,717

ANALYSES OF THE IMPORTS INTO GREAT BRITAIN FROM ALL COUNTRIES.

From—	1906.	1907.	1908.
United States.....	19,960	19,593	25,184
France	1,535	989	1,291
Spain and Portugal.....	....	....	327
Russia and Scandinavia..	4,139	4,910	1,849
All other foreign countries	8	23	33
Tons of 1,016 kilos.....	25,642	25,515	28,684
Percentage from—			
United States.....	77.84	76.78	87.79
France	5.99	3.88	4.50
Russia	16.14	19.24	6.45
All other countries.....	.03	.10	1.26
From—	1909.	1910.	1911.
United States.....	18,298	18,264	18,181
France	1,020	1,138	1,183
Spain and Portugal.....	69	339	260
Russia and Scandinavia..	2,752	3,777	4,344
All other foreign countries	30	94	38
Tons of 1,016 kilos.....	22,169	23,612	24,006
Percentage from—			
United States.....	82.54	77.35	75.73
France	4.60	4.82	4.93
Russia	12.41	16.00	18.10
All other countries.....	.45	1.83	1.24

STOCKS OF TURPENTINE IN LONDON AT THE END OF EACH YEAR.

	1906. Bbls.	1907. Bbls.	1908. Bbls.
American	18,467	24,614	45,912
French	2,544	1,051	4,601
Spanish	....	....	636
	21,011	25,665	51,149
Afloat	800	7,750	600
Totals	21,811	33,415	51,749
	s. d.	s. d.	s. d.
Price in London.....	50 3	32 3	29 3
Price in Savannah.....	67½c.	40½c.	38½c.
	1909. Bbls.	1910. Bbls.	1911. Bbls.
American	26,735	20,488	24,686
French	3,680	2,559	1,569
Spanish	299	956	276
	30,714	24,003	26,531
Afloat	3,500	2,100	14,188
Totals	34,214	26,103	40,719
	s. d.	s. d.	s. d.
Price in London.....	40 6	56 0	37 4½
Price in Savannah.....	56c.	77c.	50¼c.

Rosin.

The high prices of the lower grades, B to G, in the spring of 1911 were as remarkable as those for turpentine, and the subsequent reaction was not nearly so great as in the case of rosin; the price of paler grades, K to

W. W., did not advance in proportion.

The reasons for this are:—

1. That the extension of the cup system in the United States means an output of a greater proportion of pale grades per crop.

2. That the outlets for darker grades are more widespread than those for the paler sorts of rosin.

3. That the substitutes for rosin are less numerous than those for turpentine; moreover, the rosin substitutes are only in their infancy, whereas "Russian turpentine," "white spirit," etc., are in the vigor of their youth.

The average price for strained rosin for 1911 is by far the highest since the war.

The average price of 52 weekly quotations for turpentine is also 1d. per cwt. higher than that of 1910, the previous record year since the war. Producers of naval stores in America and Europe can hardly have had much cause to complain in 1911.

AVERAGE MONTHLY QUOTATIONS OF STRAINED ROSIN.

[Price per cwt. equals 50¾ kilos ex wharf London.]

	1906 s.	1906 d.	1907 s.	1907 d.	1908 s.	1908 d.
January	9	7½	10	6	9	6
February	9	6	10	9	9	7½
March	9	9	10	10½	9	6
April	9	9	10	10½	9	6
May	10	1½	11	0	8	4½
June	10	1½	10	10½	7	10½
July	9	9	10	7½	7	10½
August	10	0	10	6	7	4½
September	10	3	10	6	7	1½
October	10	4½	10	3	7	4½
November	10	4½	9	9	7	9
December	10	3	8	9	8	3
Average of the year	10	0	10	5	8	4

	1909 s.	1909 d.	1910 s.	1910 d.	1911 s.	1911 d.
January	8	3	10	4½	15	9
February	8	4½	10	9	17	3
March	7	10½	10	7½	18	9
April	8	0	10	9	19	3
May	8	1½	11	0	17	3
June	7	9	12	0	16	0
July	8	0	14	0	14	6
August	8	4½	14	6	14	7½
September	9	4½	14	9	15	6
October	10	2	15	1	15	6
November	10	1½	14	9	15	4½
December	10	0	14	8	16	1½
Average of the year	8	8	12	9	16	4

TOTAL EXPORTS OF ROSIN FROM FRANCE (IN TONS OF 1,000 KILOS).

1906	37,888	1909	57,234
1907	37,931	1910	55,751
1908	49,230	1911	58,789

TOTAL EXPORTS FROM UNITED STATES.

[Tons of 2,240 lbs. = 1,016 kilos net weight.]

The American crop year begins April 1 and ends March 31.

1905-1906	241,243
1907-1907	270,990
1907-1908	277,707
1908-1909	229,336
1909-1910	209,934
1911 (7 months, April-October)	152,158

ANALYSES OF THE IMPORTS INTO GREAT BRITAIN FROM ALL SOURCES.

From—	1905.	1906.	1907.	1908.
United States	58,425	66,043	66,295	55,989
France	17,902	11,793	11,789	19,056
Spain and Portugal	3,429	3,816	4,607	6,440
All other countries	775	884	126	641
Totals tons of 2,240 lbs (1,016 kilos)	80,531	82,536	82,808	82,126
Percentage from—				
United States	72.55	80.02	80.06	68.18
France	22.23	14.28	14.23	23.20
Other countries	5.22	5.70	5.71	8.62

From—	1909.	1910.	1911.
United States	50,310	48,381	50,089
France	14,610	16,987	13,250
Spain and Portugal	5,298	8,160	8,644
All other countries	781	1,503	2,288
Total tons of 2,240 lbs. (1,016 kilos)	70,999	75,031	74,271
Percentage from—			
United States	70.86	64.48	67.44
France	20.58	22.64	17.84
Other countries	8.56	12.88	14.72

BORDEAUX NAVAL STORES MARKET.

The year 1911 will have been the period (excepting that of 1863-1864), which has witnessed the highest prices and the most extreme fluctuations.

At the beginning of January, the market price was 122 francs; a rise took place at the end of March and at that time the official quotation was 150 francs for net oil of turpentine, without cash discount. As a result of this inflation of prices a decline set in on April 5 (market price 140), the fall continued and each week considerable differences were recorded, until May 31, eight weeks afterward, it was 88 francs; a fall of 62 francs per 100 kilos net had consequently taken place since March 31.

These prices remained stationary at from 88 to 91 during the month of June. There was a further decline in July and 74 francs was reached on August 2.

There was a recovery of a few francs in August and September, viz., to 78@80 francs. In October the decline resumed its severity and on October 25 a price of 71 was recorded, then one of 68 in the second fortnight in November.

Just at this time the consumption that always awaits the lowest figure revived a little, and in consequence of a little more activity in the demand the price responded actively to the upward movement and 16 francs was regained during December, so that on December 27 we had reached 81 francs. We have therefore seen during the year 1911 between the highest price (150 francs on March 29), and the lowest (68 francs on November 22), a difference of 82 francs per 100 kilos in a period of eight months, a fluctuation of 55 per cent.

Fortunately, the rosins or dry products have been kept throughout the year at a high figure and have maintained a value of 35½ to 37 francs for clear qualities and those of light color 33½ to 35 francs per 100 kilos net for intermediate colors and dark goods.

To sum up, the year 1911 will have been in France exceedingly profitable for owners of forests, for they will have received the highest average price they have ever recorded for raw gums.

For the manufacturers, the same cannot be said, for they have over-paid for the gums during the entire year; hypnotized by the high prices demanded for turpentine in the spring, they figured that the decline would never come; most of them have lost money and very few among them listened to the offers of deliveries made by export merchants. For merchants and exporters, with few exceptions, which we believe to be very small in number, the year has not been profitable, but in most cases troublesome, for with an article of trade declining 55 per cent., it is hard to make money and the effects of such a tumble are necessarily felt. Those who sold to deliver have certainly had the best of the situation, but the result will not have been brilliant, because the feeling of the buyers has to be considered who were paying too much and who do not take deliveries so readily as when they have done good business.

The year closed with a ray of sunshine; the rise which made itself evident, after a period of discouragement, was instrumental in reviving business. We are entitled to believe that the close of the campaign will permit realization of stocks under favorable conditions and that manufacturers and merchants will be able to cover amply the losses of the beginning. The harvest of 1911 was average as to quantity and quality and we estimate that within 5 per cent. there was neither deficit nor over-production.

Without being allowed to hope that there will be a return to the prices of last spring, we can believe that the rise of a few francs will continue; all the same, in our opinion, we do not want an active upward movement in the interest of those who handle resinous products, because inflation never has any value. The more prices are inflated the greater the drop and inevitable collapse.

The year opens under favorable conditions, but the production seems destined to be deficient, the trees being very much axhausted by the intense heat of last summer. Up to the present time there has been no cold weather and caterpillars threaten to invade the pine forests. Besides, on account of the high price of wood, a large number of trees have been sacrificed.

Course of Bordeaux Turpentine Prices and Weekly Receipts for the Year.

	Receipts, kilos.	Course, francs.
January 4	66,000	122
January 11	74,000	123
January 18	80,000	125
January 25	77,000	127
February 1	65,000	127
February 8	55,000	128
February 15	59,000	133
February 22	62,000	141
March 1	50,000	140
March 8	51,000	140
March 15	55,000	140
March 22	35,000	150
March 29	35,000	150
April 5	52,000	140
April 12	57,000	132
April 19	121,000	128
April 26	173,000	130
May 3	188,000	123
May 10	231,000	103
May 17	204,000	103
May 24	215,000	90
May 31	198,000	88
June 7	196,000	88
June 14	192,000	87
June 21	194,000	91
June 28	195,000	91
July 5	196,000	88
July 12	192,000	85
July 19	192,000	82
July 26	188,000	78
August 2	177,000	75
August 9	178,000	74
August 16	183,000	78
August 23	176,000	81
August 30	175,000	79
September 6	168,000	81
September 13	174,000	79
September 20	176,000	79
September 27	182,000	77
October 4	160,000	76
October 11	176,000	76
October 18	166,000	74
October 25	151,000	71
November 1	149,000	72
November 8	140,000	72
November 15	135,000	70
November 22	135,000	68
November 29	128,000	68
December 6	118,000	73
December 13	115,000	78
December 20	105,000	83
December 27	95,000	84
Total receipts	7,087,000	kilos
Average price	98.50	francs

NEW YORK DRUG MARKET.

As a rule, local dealers have reported a satisfactory condition of business during 1911. The closing months seem to have occasioned somewhat of a setback to the earlier movement, but the year's aggregate is believed to have been generally on the safe side. There was comparatively little of a speculative character to trading, on the whole, but while the tendency of buying reflected a conservative policy, it retained a degree of steadiness that appears to have brought the net results to the reasonable expectations of the trade. The year has been marked by a number of features of particular interest. Opium was subjected to a wide range of fluctuations, with the net movement decidedly bullish, establishing quotations at a record for many years. Morphine and codeine responded to this influence by substantial advances. Among the miscellaneous items menthol led in interest, values being sharply in the ascendant, surpassing those in effect during recent years. Cocaine closed on an easier basis. An early upward flurry in codliver oil was counterbalanced by later developments. Ergot quotations were on a generally high level. C. P. glycerine was in steady reaction during the year, and dynamite tended materially lower. Santonine scored substantial advances. Considerable interest was centered in sugar of milk, with values decidedly stronger. Among the balsams, South American and para copaiba were in stronger tendencies, tolu advanced sharply, while the firs and Peru were in buyers' favor. Among the barks black haw of root, cotton root and prickly ash were easier, while cascara sagrada, condurango, select elm and soap favored sellers. Vanilla beans enjoyed a prosperous year, with all varieties commanding increased values. Angostura tonka beans were at a material premium throughout the year. Among the berries cubebs were in easier tendency, while prices for prickly ash and saw palmetto were higher. In the essential oil market the Sicilian essences contributed the principal price developments last year. Bergamot was particularly bullish, but substantial gains were made in lemon and orange; anise and cassia were firmer. There was a reaction in cedar leaf; citronella scored a slight advance; clove tended lower; cubeb was easier; the rose geranium oils were stronger; peppermint was upward, as were lavender flowers, lemongrass rose, spearmint and wormseed. Among the flowers calendula scored a material advance; Roman chamomiles were dearer, but Hungarian were lower; arnica tended firmer and there was an upward flurry in American saffron. A firming of American refined camphor during the early months was followed by a reaction, but the net movement showed an advance. Asafoetida declined steadily. Gum arabic was in firmer tendency, as was mastic and guaiae. Among the herbs and leaves short buchu was the most interesting item; values were in frequent and material fluctuation, closing higher; long buchu gained slightly; a sharp recession marked damiana; digitalis, grindelia, robusta and yerba santa were lower. Among the roots, higher prices prevailed for alkanet, cut althea, arrow, burdock, culvers, gentian, golden seal, ipecac, pareira brava, rhubarb, Mexican sarsaparilla, senega, false unicorn and Belgian valerian, while declines were noted in kava kava, pleurisy, rhatany, serpentaria and spikenard. Celery was the active item among the seeds; prices were subjected to many changes, the net movement showing an appreciation. All varieties of anise seed were firmer except star. Cardamons favored sellers, as did caraway, large German fennel, poppy, quince, sabadilla and Levant wormseed. Coriander, cummin and dill were easier. All grades of shellac were subjected to depreciating influences. Among the spices, peppers were a bullish feature, while cloves were under bearish influences during nearly the entire year. There was a general easing to cassias. Cinnamon and mace were upward. All varieties of ginger were downward. Nutmegs were dearer. Among the waxes bayberry gained a sharp advance, carnauba was in firmer tendency. Japan was generally easier and parafine was steadier. Details of the various markets in review for the year follow:—

Opium.

The year in review was marked by many interesting and significant developments in opium, the climatic point being reached in December, when within a period of four days cases reached a level of $8.50, establishing a new record of values for thirty-seven years. Since 1869 this basis has been exceeded but twice, once in 1870 at $9.40, and again in 1874 at $9. The realization of an $8.50 market was the culmination of series of events which had lent their influence over almost the entire year, for with the exception of but short duration, the course of values was generally bullish over 1911 and the twelve months' increment reached fully 75 per cent. Speculation played a keen part in the stirring developments of the year, stimulated by the shortage in the visible supply. Heavy purchases were consummated both for speculative and manufacturing account. The various factors which have contributed to the leading developments of the year will be treated in their order in review for the period. The opening quotation for cases was $4.85, from which declines to $4.70 were noted during the first couple of weeks as a result of dull trade and competition. Reports of frost damages checked the downward course and there was a recovery to $4.80, but with the lack of important inquiry there was a reaction to $4.75 by the end of January. The following month brought the first real bullish demonstration, prospects of serious damage to the fall sowings imparting a sharp primary flurry. The spot market reflected the influence and by about the middle of February cases commanded $5.25. A slight abatement was occasioned in March to $5.20, owing to keenness of compeition, although the primary tendency continued upward with speculation more of a supporting factor. With April the market came into more favorable recognition, chiefly under the influence of the continued unpropitious tenor of crop forecasts. The fall and winter sowings in Turkey became the subject of the most pessimistic advices and it was stated that about 20 per cent. of the earlier plantings would yield, while practically nothing could be relied upon from the winter growth. Very little dependence was placed upon spring results, as they had proved instrumental in materially augmenting the crop but once in forty years. Early in April crop estimates ranged from 2,000 to 3,000 cases, whereas the previous production had exceeded 10,000 cases. There was a steady advance in spot values to $5.50, and the upward course was maintained during May, advices of fairly active selling for manufacturing account being a strengthening factor. By the close of the month the market reached $5.70 and the crop estimate at that time was about 3,500 cases. The foreign situation underwent a change early in June, assuming an easier status on the more hopeful crop outlook, some of the forecasts touching 5,000 cases. With continued dullness prevailing in the local market, there was a reaction to $5.60 for cases. As the month advanced primary conditions again changed their complexion, the situation shaping itself along firmer lines, with a suggestion of speculative tactics in the new aspect. Crop estimates were revised downward to 3,500 cases. The spot basis was marked up to $5.80 late in June. The bullish trend of events became of more bullish significance during July, primary values being sharply in the ascendant. Of most material effect was the steady reduction in the crop estimates, the more recent figures bringing the visible supply below the year's average consumption. A new force came to the front in August with advices of a probable shrinkage of one-half in the Persian yield. Restrictions on the marketing of Turkish opium by a new system of tithes collection and the extension of financial support to growers by interior bankers, emphasized the shortage in production by tending to retard forwarding supplies to the shipment ports. As a further mark of disparagement, the new opium was described as falling materially below that of the former product in morphia content. The local market gained steadily in strength until $8 was reached by about the middle of August. Arrivals caused a temporary setback to $7.75 later in the month, but the higher level was again established by the middle of September on a better control of the spot situation, the stronger tenor of primary advices and the stimulating of buying interest, Japan being one of the principal operators. The crop estimates were lover at 2,200 cases.

The Turko-Italian imbroglio loomed up as a possible factor in October, but nothing of a definite character developed. Primary cables assumed an easier tone, which was accounted for by more of a disposition to realize on the war prospects or a variation in the exchange basis. Then came advices of more favorable conditions as to the autumn sowings, but fairly large purchases for this country and Japan exercised a sustaining influence on the primary situation. By the end of October the local market fell to $7.75, on the materialization of goods which had been the subject of lower arrival quotations. November developments proved of more bullish effect, drought being a menace to the autumn sowings and lending further strength to the already impressive statistical position. Before the close of the month $8 became the ruling figure for cases on spot. With December came further manifestations of the speculative trend of the foreign markets and heavy sales were reported on the more threatening aspect of the fall crop. The spot market responded signally to the force of primary conditions and by the middle of December the high mark of the year was reached at $8.50 for the regular druggists' quality. Before the close of the year high testing grades were advanced 25 cents, to $9 for 11 per cent., $9.50 for 11½ per cent., and $10 for 12 per cent. Quotations for powdered and granular opium have generally reflected the strengthening course of values for whole gum, although there has been less uniformity in the market figures for powdered and granular. The latter have risen from $6.60 to $9.75 during the year under revision. The course of the market over 1911 for case opium is summarized as follows:—

OPIUM.

	H.	L.		H.	L.
January	$4.85	$4.70	July	$7.00	$6.20
February	5.25	4.75	August	8.00	7.00
March	5.25	5.20	September	8.00	8.00
April	5.50	5.25	October	8.00	7.75
May	5.70	5.60	November	8.00	7.75
June	5.80	5.60	December	8.50	8.00

We append the following table, showing the crops and the high and

low prices for cases on spot since 1870:—

Year.	Crop. cases.	Prices—High.	Prices—Low.
1911	3,000	....	....
1910	10,500	....	....
1909	4,800	6.00	4.00
1908	4,650	5.75	4.05
1907	3,000	7.00	3.45
1906	7,500	3.50	2.72½
1905	3,700	3.30	2.72½
1904	11,200	2.95	2.62½
1903	3,200	3.50	2.70
1902	10,000	3.05	2.70
1901	5,600	3.45	3.00
1900	8,200	3.45	3.00
1899	6,400	3.37½	2.80
1898	3,060	3.75	2.70
1897	7,000	*2.85	1.95
1896	3,600	2.40	1.90
1895	7,500	2.30	1.60
1894	4,500	3.25	1.85
1893	2,845	3.15	1.77½
1892	7,500	1.90	1.50
1891	7,400	2.25	1.75
1890	5,300	3.85	2.00
1889	5,500	3.40	2.82½
1888	8,700	3.87½	2.65
1887	7,800	4.60	3.25
1886	7,500	3.25	2.80
1885	7,000	3.90	3.30
1884	5,000	4.10	3.50
1883	6,500	4.12½	3.50
1882	5,500	4.50	3.87½
1881	10,000	6.25	3.90
1880	2,000	7.75	4.87½
1879	4,000	5.25	4.35
1878	5,500	4.70	4.25
1877	9,500	6.70	4.75
1876	3,280	6.60	4.75
1875	6,480	7.75	5.00
1874	2,300	9.00	5.00
1873	3,200	7.90	5.95
1872	4,500	7.90	6.10
1871	7,961	6.00	4.90
1870	4,273	9.40	5.25

*A dollar duty was operative from July, 1897, to August, 1909, when it was increased by 50c.

Morphine.

The market followed a consistent course with that of opium during 1911, six advances being noted in the product, with a total appreciation of $1.85. The opening quotation for bulk was $3.10. The first week in April brought the advance of 20c., two months later there was a gain of 15c. Early in July the market reached a higher point by 25c. The stirring developments of the first weeks of August in opium occasioned an enchancement of 50c. in morphine, establishing the bulk basis at $4.20. Quotations were unvaried until toward the end of November when an advance of 25c. was announced. A flurry in opium about the middle of December brought another 50c. gain in morphine to $4.95, which was in effect at the close.

Codeine.

The market for codeine responded more signally to the bullish course of opium over the year than was the case with morphine, the former scoring a gain of nearly 75 per cent. during the period. Opening at $3.75 for alkaloid in bulk, values were upward by 55c. in February. No further variation was occasioned until June, when an advance of 20c. took effect. July brought a further gain of 35c. and a 50c. rise was a feature of August developments, bringing the market to $5.35. September added a 30c. premium, while in December two advances aggregating 60c. became operative, making the closing basis $6.25.

Quinine.

There was little to occasion particular interest in the local market developments last year and the 14c. basis as maintained by makers since January 30, 1909, was subjected to no variation. Changes in the units of the Amsterdam bark auctions during 1911 were of no material significance and apparently afforded no reasonable basis for any departure in makers' prices for quinine. There was a generally increasing tendency to bark values during the first part of the year from 3.06 to 3.22 Dutch cents per kilo by July, but increased offerings caused a reaction to 3.07 cents at the November auction, the closing sale bringing a slightly better outcome, 3.10 cents. The first feature of noteworthy interest came in April, with news of the activity of the London outside market, about 300,000 ounces of Java product having been reported sold in two weeks. The operations were said to have been for the account of sugar speculators. Reports of a plague in Java, the principal source of bark production, had been current about this time. The London market reflected the influence by an advance from 6¼d. to 6⅝d. for German sulphate in second bands. The flurry proved of little more than passing interest in the local trade and the market soon settled into its routine status. London, however, continued its firmer course, until 7¼d. prevailed in the outside market. There was a reaction over the next four months to 6¾d. by November, but later that month the higher basis was restored, but the year closed with London at 7⅛d. More interest was occasioned in the Java product in the local market in November, as everything for delivery from the producing plant was reported sold for several months. Round quantities had been taken by the Italian Government, presumably as a result of its conflict with Turkey. The best available basis for Java in London was said to be 7⅛d., while good sales were effected on spot at 13½c. The following summary records high and low prices for bulk quinine as maintained by makers during the last twenty years:—

	H.	L.		H.	L.
1911	14	14	1901	34	27
1910	14	14	1900	37	29
1909	15	14	1899	40	21
1908	16	15	1898	25	18
1907	22	16	1897	30	15
1906	19	14½	1896	27	17½
1905	23	19	1895	28	25
1904	27	21	1894	27½	25½
1903	28	23	1893	25	20
1902	28	20	1892	24	20

MISCELLANEOUS.

Prices have been higher, from 82½c. to 87c., due to the lack of competition as a result of the more general appreciation of the basic condition by makers.

Acetone.

From 14½c. the market declined to 13c. by March, owing to the easier course of acetate of lime as well as a normal supply of the product. The market attracted new interest in June, as a result of the burning of one of the producing plants, putting another premium on available supplies. The market at this time was under the control of second hands who named nothing better than 14¾c. Slight relief was experienced from the stringency in July, so that 14c. became available.

Antimony.

Interest was occasioned in the antimony preparations in March as a result of advices of the formation of a syndicate in Europe with the credited desire to exercise a stronger control of the metal. This movement was believed to foreshadow an advance in prices for the products, but this did not materialize. In October some uneasiness was occasioned in the primary position of the metal, owing to Chinese disturbances, but no change was noted in the powdered needle variety, from 5½c. to 6c. for fine.

Alcohol.

The principal developments in the alcohols last year was an increase of 6c. in the U. S. P. variety, from $2.50 to $2.58, reflecting the advancing course of the raw materials. Wood alcohol was unvaried, from 50c. for 95 per cent., and 55c. for 97 per cent., while quotations for denatured showed no departure from the range from 40c. for 180 proof, and 41c. for 188 proof.

Bay Rum.

The market for Porto Rican was subjected to very slight change last year. It remained on a basis of $1.70 until November, when arrivals had an easing effect to $1.65.

Cantharides.

Prices for Chinese flies were upward under the influence of the primary market which assumed its keenest status in October on the outbreak of political troubles in the country of origin. A 40c. basis for whole prevailed on spot at this time, as against 30 per cent. at the opening. Competition caused a slight setback to 39c. in December. Powdered was in consistent tendency with whole, advancing from 32c. to 42c. Russian was also in upward tendency last year, from 70c. to 78c. by October for whole, and 75c. to 80c. for powdered under primary conditions.

Cocaine.

Values responded to the influences of light supplies and the position of the basic material early in the year, the level of $3.70 being reached early in February, representing an advance of 35c. over the opening figure. At the higher level makers restricted purchases to their regular trade. There was no further change until July, when a decline of 35c. brought the market to the level in effect at the opening. The move was directed principally against the threatened importation of the product, but contributing to this factor were the limited extent of the demand and the easier position of the leaves. September brought a further recession in a decline to $3.10 under the same conditions, but the month closed with a recovery to $3.25 on an improved demand, reflecting a stronger tendency abroad.

Cocoa Butter.

The market for bulk scored a material advance over the first few months of the year under the influence of the outcome of the Amsterdam auctions. The effect of the foreign sales was especially noted during the summer when the highest level of recent years was realized. During the first five months the local market had fluctuated between 32½ and 34½c., within which period the average of the Amsterdam units had covered a range from 82 to 86c. With an advance of 20 Dutch cents at the June auction, spot prices rose from 32½ to 36c., and with a further strengthening of the foreign market following the auction 38½c. prevailed on spot. The high average was well maintained at the three following auctions abroad, and on spot 38½@39c. remained the ruling basis. The tendency of the market was generally downward over the last three months of the year, a reaction from 102 to 73 Dutch cents marking the results at the Amsterdam auctions as a result of heavier offers and the waning demand. On spot the course of values was from 39 to 32c. Prices for boxes were in practically the same tendency as those for bulk. The opening range for boxes was 36@40c., and by early June 43c. became the inside quotation. There was an advance to 45c. in September on an improved demand as well as the influence of the foreign market, and this proved the high level of the year, the market yielding to 38c. by the close. Statistical details of the Amsterdam auctions will be found in another column.

Codliver Oil.

While the market for Norwegian oil was subjected to many price changes of more or less material significance in 1911, the net movement during the year was almost negligible, opening and closing quotations being practically the same. There was a bullish flurry during the first three months under the unfavorable conditions of the early Lofoten fishing, which is the mainstay of the medicinal product. Weather conditions were reported to have impeded the fishing, and the livers were said to be turning out much leaner than those of the previous season. A speculative interest was imparted to the market on the pessimistic prospects. Spot prices were steadily higher from $32.50 at the opening to $42 by the close of March. Early in April a reaction was experienced on the more favorable progress of the fishing and the lull in the demand. The market fell to $40. As the season advanced the returns from the Finmarken fishing were of an extent to compensate largely for the disparity in the earlier results of the Lofoten catch, and the market was in steady decline till a basis of $32 was reached early in July. Corresponding weakness marked the shipment position for new oil. Toward the end of July a turn in the primary situation was experienced and with a better demand prevailing for fall and winter delivery on spot the market recovered some of its lost ground. The improving tendency continued until a $35 basis was reached in September. No further change was noted until late in November, when the market again eased to $34 under the influences of competition stimulated by arrivals and the failure of the demand to meet the seasonable expectations. December brought a further recession to $32 under the same conditions.

As a basis for comparison with the results of the ten previous years we append the following table showing the production of Lofoten and total Norway oil, the total catch of fish in millions and the ruling basis for shipment of medicinal oil at the close of the season:—

	Lofoten final, hectoliters.	Total Norway final, hectoliters.	Fish, millions, total.	Quotations f. o. b. Norway.
1901	16,000	35,100	40	$14.00
1902	9,600	22,500	45	35.00
1903	600	2,800	48	120.00
1904	3,300	17,500	50	40.00
1905	11,500	41,900	45	16.00
1906	17,000	42,900	46⅝	16.00
1907	20,400	46,400	47⅜	17.50
1908	20,100	59,100	48½	13.50
1909	20,000	54,460	56½	15.00
1910	13,500	41,000	55¾	25.00
1911	7,900	43,300	64⅝	26.00

We also append as of further probable interest the following summary of high and low quotations during the last three years:—

	1909. H.	1909. L.	1910. H.	1910. L.	1911. H.	1911. L.
Jan	21.00	21.00	24.00	23.00	32.50	32.50
Feb.	21.00	21.00	30.00	24.50	40.00	33.00
March.	22.00	21.00	29.00	27.00	42.00	40.00
April	22.00	22.00	28.00	27.00	42.00	39.00
May	22.00	21.50	30.00	28.50	39.00	36.00
June	21.50	21.50	29.00	28.50	36.00	33.00
July	21.00	21.00	30.00	29.00	33.00	32.00
Aug	21.00	21.00	32.00	30.00	34.50	33.00
Sept	22.00	21.00	33.00	32.00	35.00	34.00
Oct	22.00	22.00	33.00	33.00	35.00	35.00
Nov	23.00	22.00	33.00	33.00	35.00	34.00
Dec	23.00	23.00	33.00	32.50	34.00	32.00
Year	23.00	21.00	33.00	23.00	42.00	32.00

Ergot.

Prices for ergot remained on a relatively high basis during 1911, and for nearly the entire year there was practically no distinction between the Russian and Spanish varieties. Opening at 90c. the market was upward during the first month, closing at $1.15. A shortage in the crops and the more active demand were the factors for the firming movement. In February there was a reaction to $1.10 on the lack of demand, and with this influence augmented by lower offers for shipment, prices fell to 90c. by the close of March. April brought a further easing to 85c., but before the close of that month the market was under better control and 90c. prevailed. May developments were of a bullish character, a level of $1.25 being scored by the close of the month. At this time the bearish influences, which had been associated with the easing of the market, were minimized. primary advices being generally of buoyant trend, and a good export inquiry prevailed in the local market. With August came a reaction to $1.15, chiefly as the result of a dull market. October brought a further recovering to $1.25 under the influence of unfavorable crop prospects. There was a revision to $1.20 in November and no further change was noted during the balance of the year. The Spanish crop of earlier development was placed at 18 tons, of which one-half was reported sold for this market and the balance for London. The Russian crop was reported backward, and practically nothing of a definite character could be traced regarding its extent.

Fusel Oil.

Values for refined oil underwent a substantial appreciation last year based on the conditions governing crude. The latter has been under strong control during the year and there seemed to be no prospect for a loosening of this condition. Opening at $1.60 per gallon refined rose steadily to $2 by February. By the close of March the market was on a $2.25 basis, and $2.50 was declared to be warranted on the sharply advancing course of crude. By June a $2.50 market for refined prevailed, while in August $3 was named for the limited quantity in evidence on spot. The latter basis prevailed over the balance of the year. Dealers foresee little prospect of lower prices in the near future, as the entire 1912 output of crude has been reported disposed of at a level that would seemingly warrant the maintenance of prices as in effect at the close of the year. The market for amyl acetate was under the same influences as have been noted in connection with the treatment for refined fusel oil, and there was no practical distinction in market prices between the two varieties last year.

Glucose and Grape Sugar.

With the exception of a decline early in the year, the market for glucose was steadily upward during the first ten months of the year, chiefly under the influence of the advance in corn. The opening quotation for glucose was 1.57c. from which there was a decline to 1.52c. by the middle of January. From this point the market rose to 1.67c. by April, 1.78c. by May, 1.83c. by June, 2.10½c. by July, 2.20½c. by September and 2.33c. by October. In November the reactionary course for corn and the effect of sharper competition in glucose occasioned a setback to the market for the latter to 2.23c., and with these conditions prevailing over the next few weeks the market gradually receded to 1.85c. by December. The depressing conditions were minimized before the close of the year and a recovery to 1.97c. was noted. The market for grape sugar was under similar influences; following a decline from 1.71c. to 1.66c. early in the year, there was an uninterrupted strengthening of values to 2.47c. by October. After a reaction to 2.01c. the market closed at 2.11c.

Glycerine.

The reaction which marked the close of 1910 from the high level which had been reached earlier in the year in the C. P. product was unchecked throughout the year under review, and the market closed at a level below that in effect at any time during 1910. The opening quotation for bulk in 1911 was 25½c., but by the first two weeks of the year the market had been subjected to easing influences in a slight break in the foreign position of crude and the effect of keener competition in refined, particularly on the part of Western refiners, and 25c. was in effect on spot. A somewhat firmer tone was imparted under the influence of the crude situation, but the local demand remained inactive and with competition sharpened there was a decline to 24¾c. in March. The dullness of the dynamite market by this time had assumed a more bearish effect on C. P., and prices for the latter were adjusted more to the level for dynamite, so that 24c. was named for C. P. by April. As the warmer months advanced the effect of the disturbing conditions was augmented and the market declined steadily to 23c. by June, 22½c. by July and 21¼c. by August. In September there were hopes that the market would reflect the more favorable status of improved seasonable buying, and while this condition was evidenced to an extent, the depression of the dynamite situation proved a counteracting factor, and it was chiefly under this latter influence that the market for C. P. continued in downward tendency over the months when the demand is usually at its best. Disappointment was expressed over the backward state of the seasonable inquiries, and there was apparently nothing in the crude situation abroad to impart a more favorable impression on the local situation. By October 20c. was named for C. P. and further recessions were the rule to 17½c. at the close.

Values for dynamite glycerine were also subjected to a sharp revision in buyers' favor last year, but there were occasional developments of a more favorable character to break the monotony of the downward course. Opening at 24c., dynamite fell to 23c. before the close of January, but in February a 23½c. basis was restored, in consequence of a more active demand. This condition proved of short duration, for by March supplies were more freely offered and a sale of a car lot was reported at 23¼c. The more urgent offers were cleared from the market by early April, so that 22½c. became the ruling quotation. Later in the month the effect of dullness was augmented and the market again showed signs of weakness, 21½c. prevailing. In May there were reported sales at 22c., but from this level the

market fell gradually under the keener selling pressure as well as the influence of the crude material, 18½c. being available by August. By October the bearish conditions were fortified on freer supplies, and sales were reported on the basis of 16c. December brought a measure of relief from the depressing factors, freer buying eliminating the cheaper parcels, so that 16½c. became the best available basis for prompt shipment, and later in the month this figure was said to have been realized for a car lot on March delivery.

The following summary may be of interest in showing the prevailing range of high and low quotations for C. P. glycerine during the last four years:—

GLYCERINE, C. P.

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan....	16	16	16½	16½	19⅝	19¼	25½	25
Feb....	16	16	16	16	20	19⅝	25	25
March..	16	15½	15⅝	15⅛	20	20	25	24⅝
April...	15½	14¼	15¼	14⅜	19⅝	19½	24⅝	24
May....	14¼	13⅜	15½	15	20	19½	24	23½
June...	13⅜	13½	17⅛	15⅝	20½	20	23	23
July....	13½	13½	18	17½	20½	20½	23	22½
Aug....	14½	13½	18	18	23	20½	22½	21¼
Sept....	14¼	14½	18½	18¼	24	23½	21¼	21
Oct....	15	14½	18⅝	18½	25	24	21	20
Nov....	16	15¼	19	18⅝	26	25½	20	18½
Dec....	16½	16½	19	19	26	25½	18	17½
Year...	16½	13½	19	14⅜	26	19¼	25½	17½

Guarana.

Prices for this item were uninterruptedly in buyers' favor last year, the contributing factors being the lack of demand, stimulating competition to a keener degree and freer supplies. From $2.20 at the opening, $2.15 became available by the middle of January. March brought a recession to $1.85. Other changes during the year were declines to $1.75 by May, $1.70 by June, and $1.65 by December.

Haarlem Oil.

Opening at $2.25 the market developed an easing tendency in February as a result of freer offers, and $2.10 prevailed at the close of the month. Under the continued keeness of competition there was a further recession to $1.90 by March, but before the close of that month a move to concentrate spot supplies which had become well reduced by this time, resulted in a recovering market to $2.10. The improvement was destined to be of short duration, for in April freer offers again exerted their influences with sellers at $2. Dullness and competition marked the developments over the remaining months, the year closing at $1.75.

Hops.

There was a substantial enchancement in all hop values last year, the market being in light supply during nearly the entire period. At the opening the better grades of New York hops were quoted at 23@25c., from which there was a steady advance to 50c. as the minimum figure by September. Pacific Coast hops, which opened at 18@20c., were in similar tendency to 40c. After a reaction to 47c. in New York and 36c. in Pacific Coast by October, values again maintained their upward tendency, closing at 50 and 45c. respectively. A statistical review of the hop situation reported the 1911 crops approximately as follows:—California 85,000 bales, Oregon 75,000 bales, Washington 25,000 bales, New York 30,000 bales, which, with a total of 30,000 as the carried-over stock on September 1, 1911, brought the total supply to 245,000 bales. The estimated net export from September 1, 1911, to August 31, 1912, was placed at 50,000 bales, and with the consumption placed at 245,000 bales, it was reckoned that there was a visible shortage of 50,000 to September 1, 1912. Estimates on the 1912 crop were as follows:—California 100,000 bales, Oregon 111,000 bales, Washington 30,000 bales, New York 35,000 bales, a total of 275,000 bales. Figures on 1911 foreign crops were as follows:—Germany 222,000 cwt., Austria-Hungary 178,000 cwt., England 354,000 cwt., Belgium and Netherlands 52,000 cwt., France 45,000 cwt., Russia 62,000 cwt., Australia 15,000 cwt., making a total with the American crop, placed at 400,000 cwt., of 1,328,000 cwt., as compared with 1,557,000 cwt. in 1910, and 924,000 cwt. in 1909. The total area planted was given as 235,235 acres in 1911, 233,398 acres in 1910, and 240,679 acres in 1909.

Lycopodium.

There was an upward tendency in market prices during the first three months of the year, from 42½c. to 50c., reflecting the force of the primary situation. The upward course of the foreign market was emphasized during the summer drought being reported in the producing districts of Russia. On spot there was a response to 54c. by early August. Lower offers were the rule in September and October, causing a reaction to 47c. After a recovery to 48c. under the primary influence late in October, there was an easing to 47c. at the close.

Manna.

The market for small flake rose from 50c. to 63c. by March, spot supplies being light and the tendecny abroad generally firmer. Arrivals had an easing influence in May, so that 60c. became available on spot. Toward the end of September there was a flurry abroad, based on the unfavorable crop outlook, and under this influence 70c. prevailed on spot with a further advance to 75c. early in October. Developments during the last two months of the year contributed to buyers' interests, arrivals stimulating competition, bringing the market to 65c. at the close. Quotations for large flake fluctuated between 85@90c. during the first five months of the year. Late in September the effect of strengthening primary advices based on pessimistic crop reports caused an advance to $1 on spot, which remained in effect until December, when there was a reaction to 95c., due to competition.

Menthol.

The developments in this item during 1911 constituted one of the most interesting features of the general drug market. The course of menthol during the year was generally bullish. The climatic point was the realization of $7 in December, representing the highest level since 1903. Other exceptional points during recent years were $8 in 1902, $7 in 1902 and $6 in 1904. The more general range of quotations as indicated by the course of the market under what may be termed more normal conditions is indicated by the following:—$1.90@2.60 in 1907, $1.85@2.15 in 1908, $2.05@2.75 in 1909 and $2.60@3.45 in 1910. Speculation has played an important part in the 1911 events, and this factor has lent more than the usual significance to the characterization of menthol as "football of the drug trade." The unusual status of the market last year was undoubtedly based on the extremity of supplies, supplemented by the reported existence of heavy short interests in the European markets. The curtailment of supplies was associated with reports of continuous rains and floods in the producing districts, the effect of which was undoubtedly augmented by the relatively low point stocks had been permitted to reach in the principal distributing markets. Treating the local market we find a basis of $3.45 prevailing at the opening of the year. Values rose to $3.75 during January on improved trading and the influence of the primary market. Within the first ten days of February a $5 level had been reached, but the advance of $1 within a week did not command especially firm conviction. With this flurry were associated the unusually bullish course of the foreign markets, rumors that stocks in the primary market had come under the control of a leading operator, and the indications of a material reduction in London supplies. The London market at that time was believed to be the keynote of speculative manipulation. The $5 spot market could not be sustained in the face of the general skepticism of buyers, and steady declines were noted in sympathy with the reactionary tendency, both in London and Japan, until late in March, when a sale was reported at $4.20. With April came a flurry of freer buying at the lower level, with Hamburg seeking supplies in the local market. There was a recovery to $4.50 The keener practices of sellers soon put the market to $4.40, but as sales for consumption improved and the tendency abroad contributing greater support to the market another upward move was inaugurated, reaching its high point at $5.25 late in June. Available supplies had by this time been materially reduced and the spot market was generally under the import parity. During July, as the demand slackened and the foreign markets were in easing tendency, spot prices fell to $4.90. Under similar influences declines to $4.75 were noted to late August. With September came another turn, $5.25 being reached as a result of the lessening of stocks on freer sales with the favorable initiative of the foreign markets. Values rose sharply during October, $6.75 being reached toward the close. The market was frequently of a nominal character during the month owing to the limitation on spot supplies, and arrival parcels were the subject of lively trading among local dealers as well as for consuming account. On advices of a 25s. market in London, spot holders practically withdrew from the market. Early November brought a measure of relief from the stringency in the form of arrivals which were offered at $6.50, but the bulk of the goods at hand went directly into consuming channels. This condition caused a further easing to $6.25, but with the absorption of the cheaper lots and the keener interest in futures, values were again upward, $6.75 prevailing at the close of the month. Expected arrivals, which were counted upon to bring the market to a more reasonable basis, failed to materialize, and the small lots available were kept in steady consuming movement. It was this character of trading as well as the influence of the foreign markets that resulted in the $7 basis early in December. As the month advanced holders were induced to a freer realization policy at the attractive margin the market afforded. Under this influence a reaction to $6.75 was noted, but with the clearing of the cheaper lots the higher level was restored, only to give way to a $6.90 market later in the month. The profit-taking policy prevailed at the close of the year, rendering the market more or less nominal.

The following summary shows the high and low prices for each month during the last four years:—

	1911.		1910.		1909.		1908.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan....	3.75	3.45	2.75	2.75	2.20	2.05	2.00	1.90
Feb....	5.00	4.00	2.75	2.65	2.15	2.15	2.00	2.00
March.	5.00	4.40	2.65	2.60	2.15	2.15	2.00	1.95
April...	4.50	4.20	2.65	2.65	2.15	2.15	1.95	1.90
May....	4.65	4.45	2.65	2.65	2.15	2.15	1.90	1.85
June...	5.00	4.65	2.75	2.65	2.45	2.15	1.85	1.85
July....	5.25	4.90	2.90	2.70	2.45	2.40	2.00	1.85
Aug....	4.90	4.85	2.95	2.90	2.37	2.35	2.00	2.00
Sept....	5.25	4.75	3.20	2.95	2.60	2.35	2.15	2.00
Oct.....	6.75	5.25	3.40	3.25	2.50	2.50	2.15	2.10
Nov....	6.75	6.50	3.40	3.35	2.65	2.50	2.40	2.00
Dec....	7.00	6.75	3.45	3.40	2.75	2.75	2.05	2.00
Year...	7.00	3.45	3.45	2.60	2.75	2.05	2.15	1.85

High and low quotations for the years 1892 to 1907 follow:—

	H.	L.		H.	L.
1907.....	$2.60	$1.90	1899.....	$3.00	$1.20
1906.....	2.90	2.15	1898.....	2.60	2.00
1905.....	3.00	1.75	1897.....	4.20	1.85
1904.....	6.25	2.50	1896.....	4.75	2.50
1903.....	8.00	5.25	1895.....	4.75	4.00
1902.....	7.00	3.80	1894.....	6.00	4.50
1901.....	4.75	3.50	1893.....	4.75	3.25
1900.....	3.90	2.35	1892.....	4.00	2.25

Mercurials.

Quotations for the various mercurial preparations were in upward tendency during the first three months of the year in sympathy with the cost of the basic material. The high level of the market was reached late in March in the hard mercurials, by which time advances had been scored as follows:—Calomel, 81@95c.; corrosive sublimate, 72@86c. for lump, crystals and granular, and 75@89c. for powdered; precipitates, 91c.@1.05 for red and 96c.@$1.10 for white. Soft mercurials were at their highest point in July at 46c. for blue pill and 42c. for mercurial ointment, 33 per cent., and 52c. for 50 per cent. Later developments were of a reactionary tendency in the hard mercurials, following the trend of the basic market influencing declines to 90c. in calomel; 81@84c. in corrosive sublimate, and $1 in red and $1.05 in white precipitate. Soft mercurials also closed on an easier basis at 42c. for blue pill and 40@50c. for mercurial ointment.

Nitrate of Silver.

Price changes in this item have been based upon the market for bullion and there is little interest in the year's review beyond the record of these variations:—Opening at 35c. for 500 ozs. there was a decline to 33¼c. by February, but from this point the market was generally firmer to 34½c. late in April. A reaction to 33¼c. marked the development over the next few months, but the course was again upward, the high level of the year being reached at 35¼c. early in December, from which there was a recession to 34½c. by the close.

Quicksilver.

A shortage of spot supplies occasioned an upward flurry early in the year from $42 to $52 in 100 flask lots, and from 57½ to 75c. in the jobbing schedule by March. An easier tendency abroad brought the market to $44 in the quantity basis and 63c. for jobbing lots by May, but there did not seem to be any abatement of the spot scarcity. Under this influence a $52.50 and a 70c. market was established in July, but the figures were nominal on the limitation of supplies. From this level there was a steady reaction as a result of better supplies, and toward the end of the year competition was stimulated to an unsettling degree. Closing quotations were $44 for 100 flask lots and 61c. for jobbing quantities.

Rochelle Salt.

From 18c. as the opening quotation, values rose to 20c. by June, reflecting the influence of the basic material. With this influence mitigated later in the year, and under the keener effect of competition, the opening basis was in effect by November, at which the year closed.

Seidlitz Mixture.

This market has been under similar conditions as noted in the treatment on rochelle salt. The opening quotation for seidlitz was 14½c., with an advance to 16½c., noted by June. The easing influences late in the year brought the market to its opening figure.

Santonine.

Sharp advances characterized the 1911 movement in this article. All of the changes have been based on the primary situation and are regarded as arbitrary, owing to the absolute control of the production. The opening quotation for 200 lb. lots was $10.75. Early in March there was an advance to $11.10, while April brought a $11.65 market. There was no further change until early July when another 55c. advance became effective. Changes in September and October were of more material significance, two advances of $1.10 each making the official price $14.40. In November another 55c. increase brought the market to $14.95, which prevailed until the close. Second hands have followed a cutting policy throughout the year, particularly during the last few months, when the radical changes in the official schedule were announced.

Sugar of Milk.

This market presented a number of interesting features during the year and values were sharply in the ascendant, especially during the later months of the year. Over the first six months quotations did not vary beyond the range of 9½@9¾c., but during this period the firmer tone developed on the improving demand, chiefly for export. By July a 10c. basis prevailed, the market coming under better control. By August the export demand assumed heavier proportions as a result of drought in the foreign producing countries, and 10½c. was named on spot. September brought a more material strengthening of values on the increasing stringency of supplies and the continued activity of the export demand. By the close of the month the market was on a 15c. basis. Early in October the situation tightened, the limitation on available supplies becoming so marked that the leading interests were handicapped by the unusual conditions governing the raw product and difficulty was experienced in covering even the most moderate requirements. The premium on available supplies primarily occasioned by the scarcity of milk, both in this country and abroad, was augumented by the growing consumption of milk powder, which afforded a more remunerative market to producers than milk sugar. By the middle of October quotations covered a wide range at 16@25c., the market being practically under control of second hands, who were keen to take advantage of the stringency in the sources of original supply. Toward the end of the month the situation assumed a more normal status with quotations narrowed to 15@20c. In November a firmer market prevailed with the cheaper offers cleared or withdrawn, and steady improvement marked the balance of the year, closing at 18@20c.

Other Miscellaneous Changes.

Other items of miscellaneous drug interest not included in the foregoing treatment comprise the following:—

BROMIDES.

An advance of 6c. featured the market in February, establishing ammonia at 41c., potash at 31c., and soda at 37c. The move was associated with the better relationship among producers, as well as the natural recovery from the low level of late years.

CAMPHOR, MONOBROMATED.

An advance of 10c. in March established this product on a $1 basis under the influence of the camphor market, but competition had an easing effect in September, causing a recession to 95c.

CASTILE SOAP.

Prices for Conti's white soap declined half a cent to 11¾@12c. on shipments from Leghorn after September 30, and another half cent on shipment after December 31, as a result of the lower level of olive oil.

CASTOR OIL.

A decline of one half a cent was noted in December, which was attributed to the position of the raw material as well as the keener effect of competition. This established quotations at 10c. in barrels and 10½c. in cases for medicinal oil.

CHLORAL HYDRATE.

The course was easier from 75 to 74c. by March as the result of competition.

CHLOROFORM.

Two declines of 2c. each marked the year in this product, establishing closing quotations from 23@28c. Competition was assigned as the cause for the lower level.

CUTTLEFISH BONE.

Trieste bone was in easier tendency from 16½c. to 15c. by April under the influence of sharper competition. There was also a revision in small jewelers' bone from 38c. to 35c.

LITHIA SALTS.

There was an advance of 10c. in December in the principal salt, carbonate, to 67c. The change was attributed to the better appreciation of the ruling conditions by makers.

SODA BENZOATE.

A decline from 26c. to 25c. was in effect in December, reflecting the easier position of the basic material.

TAMARINDS.

Arrivals in June had an easing effect on prices, whereby kegs declined from $3.25 to $2.50, and the pound basis from 5c. to 4c.

TARTAR EMETIC.

An advance of 1½c. to 25c., under the influence of the basic material, was noted in March, but in September the market receded to 23½c., due to competition.

THYMOL.

Prices declined from $1.40 to $1.05 in January, owing to the disturbing influence of the foreign situation. In March there were reports of a settlement of the difficulties abroad, and the effect was reflected by an advance to $1.35 on spot. October brought the next change, a reaction to the lower level, under the foreign influence as well as the slow demand on spot.

Acids.

CARBOLIC.

Values for bulk acid were decidedly stronger last year. Our record shows an increase from 7½c. to 17c. by November. The course of the market was consistent with that at primary quarters, where the most material factor seems to have been the engagement of large quantities for the countries involved in international complications as well as for the requirements in those

places where plagues were prevalent. The premium on available supplies was not relieved at any time during the year, and it was frequently difficult to obtain offers for primary shipment. Pound bottles were also under this influence, although the advances were less proportionate than those for bulk. Much irregularity was noted in the market for the former. The opening basis for bottles was 12½@14c., while at the close 20@25c. was the ruling range.

CITRIC.

This market remained uniform at 38½@39c. during the year, and presented nothing of noteworthy interest with the exception of a buying flurry late in September on the outbreak of the Turkish-Italian imbroglio.

PYROGALLIC.

This market scored two advances during the year under the influences of the corresponding tendency of the basic material. The first was announced early in June, establishing a $1.25 basis, as against $1 previously, and the second was noted in December to $1.35.

SALICYLIC.

The only change in this market was an advance of 1c. late in September to 32c. under the influence of carbolic acid. In May new interest was occasioned in salicylic acid with the announcement that makers had, for the present, declined to book contracts for delivery, entering engagements only for spot account. This attitude was due to the uncertainty of the conditions governing carbolic acid.

TANNIC.

Prices for this article have reflected the upward course of raw material, two advances being announced in November aggregating 20c., and establishing regular at 68c. and U. S. P. at 78c.

Balsams.

COPAIBA.

Values for South American copaiba have shown more or less irregularity during the year under review, chiefly as a result of the conflict of views as to goods on direct importation from producing districts and those from Hamburg, where a process of reducing the cost without departing from the official standard in force in the country seems to be successfully practiced. The opening basis was comparatively uniform at 38@40c. In March there was a widening of the range to 28@42c. on the reduction of supplies and with this condition emphasized in April, the market was established on a generally firmer basis, 40@45c. About this time sales of direct importations by first hands were reported at 40@42c. Values continued their firming course and in June importers were said to be well cleared and maintaining 42c. for anything still available. The jobbing range became 42@45c. Later during the summer values were in easier tendency as a result of dullness and competition and the inside quotation became 38c., although there was question as to the character for the cheaper offers. The market was under more favorable conditions during October, and 42c. was realized for uncleaned lots from dock on original importation. Early in November 40@48c. represented the jobbing range and with sales reported by first hands at 45c., the range was broadened to 50c. Continued light receipts were a feature of the market during the closing weeks of the year and direct receivers were credited with realizing up to 47½c. There was a firming of the views of the cheaper holders to 42c., while goods of genuine character maintained to 53c. The following table shows the range of quotations over the year, but loses much of its significance in the fact that figures represent the views of holders of goods of an origin of doubtful market significance:—

COPAIBA, SOUTH AMERICAN.

	1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.
January	47½	45	40	40	38	38
February ..	50	47½	42½	40	38	38
March	50	47½	42½	42½	38	38
April	47½	47½	42½	40	40	38
May	47½	45	40	40	40	40
June	45	45	40	40	42	40
July	45	42½	39	39	42	39
August	42½	42	37	37	39	38
September..	42	40	38	37	38	38
October	40	40	38	38	38	38
November...	40	40	38	38	40	40
December...	40	40	38	38	42	40
Year	50	40	42½	37	42	38

Values for Para copaiba were in firmer tendency during the early part of the year as a result of short supplies, 55c. prevailing late in March, as against 46c. in the opening figure. This condition was not relieved over the next few months and 57½c., became a general quotation. Limited quantities were in evidence at 55c., but with an increasing demand in the early fall the market was soon cleared of the cheaper lots and 60c. became effective. Toward the end of the year the scarcity was somewhat relieved and there were sellers at 55c.

CANADA FIR.

A steady depreciation in values marked the period under review, the principal factor for which seems to have been the keenness of competition. At the opening of the year $4.40 in barrels and $4.50 in cases prevailed. Before the close of January a 5c. decline was noted. There was no further change until April, when the sharpness of competition assumed greater force in the anticipation of new supplies. During April the market fell 20c., to $4.15@4.25. June brought the next change, a cut of 5c. under the same conditions. There was a nominally steady tone to the market until November, when the pressure to realize caused a decline of 10c. The year closed with quotations at $4@4.10.

OREGON FIR.

Practically the same influences have characterized the market for Oregon fir over the year as have been noted in connection with the Canada variety. Oregon opened at 90c.@$1, and by the end of January fell to 85@95c. The next changes were occasioned in April when prices declined to 80@90c., and this basis ruled over the balance of the year.

PERU.

In reviewing this item for 1911, we find the same difficulty in a comprehensive treatise of the market as in the case of South American copaiba. Quotations for Peru show a much wider range, in fact, than those for copaiba and, as in the latter instance, the distinction is one of the characteristics of the goods. At the opening of the year $1.65@1.75 was a fairly representative range. Revisions in the inside figure to $1.55 were noted during the first few weeks. An incentive toward firmer views was occasioned in June, when $1.70 was reported to have been realized by first hands, and jobbing quotations were generally on the basis of $1.60@1.85. The outside figure became $2 in August, but $1.55 represented the inside range. Revisions, especially in the higher quotations, were noted in the fall and by November the basis stood at $1.50@1.80. There was a further narrowing of the market figures later in the year to $1.45@1.65.

TOLU.

The course of the market for tolu was featured by an unusual number of changes during the year, in which the advancing tendency was signally predominant, the high level of the year being three times over the opening figure. Marked scarcity of supplies was the dominant factor for the substantial gains. The upward tendency over the first six months was more gradual than later developments. From 20c. at the opening, the market stood at 26c. by the end of June. Small arrivals early in July caused a temporary reaction to 25c., but the setback proved of short duration and by the close of the month everything below 28c. had been cleared, and shortage was again a factor in the market.

Steadily the market rose over the next few weeks, the most material gains being scored with the broadening of the demand, incidental to cooler weather. By the middle of October a 50c. basis prevailed at which sales were reported. The demand assumed more active proportions late in November and early in December, London and Hamburg being in the local market with a view to relieve the scarcity at those centres. For the small spot supplies holders asked 60c. the first weeks in December. As the month advanced inquiries abated and with moderate arrivals, a reaction to 52½c. followed.

Barks.

CASCARA SAGRADA.

This market scored a moderate gain during the year, but the general conditions did not fulfill the expectations of the trade, the absence of important inquiry minimizing the effect of a favorable statistical situation. The opening range was 7½@9c., according to age, quantity and seller. In March the inside figure was raised to 8c. in sympathy with the firmer trend of values on the coast, where stocks were reported the lightest in years. The market continued on an even basis until June, when 8¼@8½c. prevailed for the cheaper lots of bark, reflecting the force of primary conditions, the prospects for the season's peel being reported unfavorable at that time. Sales of new bark were effected for shipment at 8¼c. here, and on export demand contributed a better tone to the market. With the advance of July values were in steady appreciation under the influences of a firming coast situation and a freer movement on spot, and 9c. became an inside spot quotation. This was as high a point as the market reached during the year and the developments during the last few months were disappointing. The demand was generally of a routine character and quotations were, on the whole, not on a parity with those prevailing at the coast. The 1911 peel was estimated at 1,000@2,000 tons, surpassing the earlier expectations, but nearly all of the crop was reported sold for Eastern consuming account and for export. The following table shows the highest and lowest prices by months during the past five years, based on the figures for new bark, older goods usually bringing a premium of 1@1½c.

CASCARA SAGRADA.

	1907.		1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.
Jan...	9½	9½	9	9	8½	8½	7	7	7½	7½
Feb...	9½	9½	9	9	8½	8½	7	7	7½	7½
Mar...	9	9	9	7½	8½	8½	7½	7	8	7½
April..	9	8½	7½	7	8½	8½	7½	7½	8	8
May...	8½	8¼	7	7	8½	8½	7½	7½	8	8
June..	8½	8½	7	7	8½	8½	7½	7½	8¼	8
July..	8½	8½	6½	6½	8	8	7½	7½	9	8½
Aug...	9½	8½	9	7½	8	8	7½	7½	9	9
Sept...	10½	10	9½	9½	8	8	7½	7½	9	9
Oct...	10½	10½	9½	8¾	8	8	7½	7½	9	9
Nov...	10	9½	8¾	8½	7	7	7½	7½	9	9
Dec...	9	9	8¾	8½	7	7	7½	7½	9	9
Year..	10½	8½	9½	7	8½	7	7½	7	9	7½

COTTONROOT.

There was a buoyant tone to the market during the early part of the year as a result of short and well concentrated supplies, and advances from 15c. to 22c. by April were recorded. Freer offers caused a reaction over the next few weeks and 17c. was available by June. The effect of light stocks was again evidenced upon an improving demand in the fall and a 22c. basis was restored by early October. From this level the market was in steady recession over the balance of the year, especially during the closing months, when cheaper supplies of the new crop materialized, and a 12c. basis marked the year's end.

PRICKLY ASH.

Practically all distinction between Northern and Southern varieties of prickly ash bark was eliminated during the year and our review will be general. There was a continued reaction from the high level reached in 1910 during the first half of 1912, chiefly as a result of competition stimulated by the prospect of better supplies. From 55c. at the opening, values fell to 18c. toward the close of June. By July the downward course had been checked, as supplies came under closer control and 20c. was a ruling quotation. By September scarcity became a dominant factor and 25c. was generally maintained. This condition lent further strength to the market by October, when a basis of 28@35c. was established, with sales reported at the higher figure. The following month brought the market to 32@35c., but a slight recession to 30c. as the outside quotation was occasioned in December on freer offers from the country, although doubt was raised as to the quality of the lots in evidence.

BLACK HAW (ROOT).

Occasional variations marked the course of this item over the year in review. The opening quotation was 23c., from which there was a yielding to 16c. by May, owing to freer offers. A firmer primary tendency and a reduction of available stocks checked the easing course and 17c. prevailed late in July. These conditions were the occasion for further improvement to 19c. in September and the year closed at this level.

SOAP BARK.

Minor fluctuations were occasioned in cut and crushed bark last year, with the tendency favoring buyers. At the opening cut was quoted at 8½@9c. In February 8c. was named as a result of competition and a decline to 7½c. in June was due to the same condition. There was a recovering to 8c. in July on the firmer primary tendency, as well as the attempt to tax the article as a crude drug, advanced in value at 10 per cent., and ¼c., instead of admitting it free. There was no further change over the balance of the year. Crushed bark was in easing tendency under a backward demand from 7½c. to 6½c. by June. Under the influence of stimulating primary advices a 7c. basis was reached in July and this prevailed until the close of the year. Whole bark was uneventful, a basis of 6½@7c. being in effect over the year.

OTHER BARK CHANGES.

Among other changes of interest among the barks during 1911 were the firming of Condurango from 11c. to 17c., owing to light and concentrated stock, the upward course of select elm in bundles from 15c. to 18c. in consequence of reduced supplies, the strengthening of wahoo bark of root from 38c. to 50c., and of tonga bark from 38c. to 40c., owing to limited holdings.

Beans.

VANILLA.

The course of the vanilla market over 1911 presented a number of features of unusual interest and the developments have, on the whole, been of an exceptionally significant character. Every description commanded a materially stronger position at the close than at the opening, and new price records for several years were established. Our first treatment will be of Mexican cuts, which have held a commanding place in the local market during the year and which probably respond most signally to market influences. Of the 75,000 pounds of cuts representing the proportion of the 1910-1911 crop, the greater part had been sold by the opening of the year under review on the aggressive campaign waged during the later months of 1910. The consuming demand was soon stimulated with the entry upon the year in review and cuts as the most advantageous purchase at $2.37½, held the centre of trade. With Mexico in steadily upward tendency for the unsold cuts, spot values readily reflected the favorable influences and by the close of February the market was established at $3. At the same time $2.87½ was reported to have been realized in the primary quarter. March brought an appreciation to $3.50 on spot, with $3.37½ ruling in Mexico. By May $3.75 was a prevailing quotation in the local market, the consuming demand lending continued support. No further change was occasoned over the remaining months and buyers became more concerned in the cheaper grades of new beans on the market. With the renewal of requirements in the fall, cuts came into keener interest, but supplies had been materially reduced and the efforts of the local trade were turned toward the approaching crop. The marketing of new supplies was stimulated and fairly good sales for future arrival were effected at $2.50. Primary quarters were soon in soaring tendency on the keen manifestation of buying interest for this market, and by the close of the year $3.50 was reported as the ruling figure in Mexico. A comparison of quotations for Mexican cuts in the local trade is afforded by the following summary:—

MEXICAN CUTS.

	Per pound— High.	Low.
1899	$10.00	$9.00
1900	9.00	7.75
1901	8.00	5.75
1902	5.75	3.25
1903	4.00	3.50
1904	3.50	2.50
1905	2.50	1.50
1906	2.15	1.75
1907	3.87½	2.00
1908	3.75	2.00
1909	2.62½	2.25
1910	3.12½	2.25
1911	3.75	2.37½

There was also a material enhancement in values for Mexican beans of standard quality last year under similar conditions as have been noted regarding cuts. This realization has been in the face of what has probably been the greatest extent of supplies in the experience of the market. The 1910-1911 production of beans reached the heavy total of 360,000 pounds, while close to 100,000 pounds were still available of the former crop at the beginning of 1911. The year opened with quotations for beans on the basis of $2.75 for the cheaper end, with prime ranging to $4.50. By February the inside figure was raised to $3 on the increasing demand and reports were current that 200,000 pounds of the new crop had been taken for the local trade, with one-half of the quantity sold for forward delivery to consumers. With the advance of February, $3.25 became the best available basis for beans, the absence of competing Bourbons being a factor for the upward course of Mexicans. For new crop beans as they ran, $2.50 was quoted for May-June arrival. The spot demand cleared everything below $3.50 toward the end of March, by which time all of the current crop in Mexico was reported sold with the exception of some lots for which impracticable prices were maintained. The cheaper parcels were being steadily cleared on spot and $3.75 became an inside figure late in April. It was estimated that fully one-half of the new crop had been sold for consumption and with the clearing of the last parcel of old beans, spot holdings were said to be at their lowest level for the period in ten years. With the arrival here of the new beans during the summer, the expectations of the trade in a crop of desirable quality were doomed to disappointment, for the goods showed traces of hurried curing, resulting in traces of imperfections, making them of doubtful conservation. The proportion of sound beans in the crop proved unusually small and many of these had been sold for export. The general market showed comparatively little effect of the prevalence of this condition, for many of the unsound beans were converted into cuts and for the balance special consuming outlets were found. By August $3.87½ became an inside figure for beans, but the quality of the cheaper lots was questioned. The revival of the demand for full requirements centered in the more attractive purchases of Mexican beans and cuts and the market for beans was established at $4 as a minimum. The year closed with a generally firm tone, curers paying materially higher prices for the new green beans under the stimulating influences which had marked the season's campaign. A summary of high and low prices for Mexican beans during recent years follows, the basis being the cheapest goods on the market:—

MEXICAN WHOLE BEANS.

	Per pound— High.	Low.
1899	$12.00	$11.00
1900	11.00	9.00
1901	9.00	6.75
1902	6.75	4.75
1903	6.50	5.00
1904	5.00	3.75
1905	3.50	2.75
1906	2.75	2.75
1907	4.25	2.75
1908	4.25	3.00
1909	3.25	2.75
1910	3.37½	2.75
1911	4.00	2.75

The conditions which resulted in substantial advances in Mexican beans last year also contributed to a material appreciation of Bourbons. A feature of the market for the latter within the period under review has been the lightness of available supplies, importations having been checked to a large extent by the impracticability of foreign sources on the basis of prevailing prices in the local trade. At the opening of the year Bourbons were quoted on spot at $2.75@3.50, as to quality. The early weeks brought a more active market, clearing the cheaper goods and making the inside quotation $3 by about the middle of February. About that time 36 francs per kilo was reported to have been paid for inferior lots in France for this market, while 40 francs was asked for head and tail parcels. Further improvement was scored in March, the spot basis becom-

ing $3.35, still below the primary parity. The 1911-1912 crop was estimated at a total of 65 tons, against 43 tons previously, but the French market maintained a firm status, as stocks had reached an unusually low level and there seemed to be prospects of clearing old supplies before the arrival of new beans. Early in April everything below $3.50 was apparently taken from the local market, while the foreign basis was 40@45 francs. A further advance to $3.60 was scored the first week in May, the bullish conditions governing Mexicans lending a measure of sympathy to the Bourbons, supplies of which continued relatively low. The crop was estimated at that time at 45,500 kilos. One of the most significant of the early crop developments was the securing of the Seychelles production, usually taken by London interests and forming the principal basis for the London public sales by French operators. About half of the Reunion crop was reported sold for France at a level that occasioned predictions of a 45-franc basis by fall. Hamburg was also reported a keen buyer of new Bourbons, but local dealers, as a rule, followed a more conservative policy, feeling that the ruling prices, about ten francs over the basis at which large purchases were effected for import the previous year, would induce a hand-to-mouth movement on the part of the consuming trade in this country. By the middle of July $3.75 was in effect here for the cheaper varieties of Bourbons and this quotation proved available over the balance of the year. The best basis for arrival of new Bourbons was reported in September as $3.87½ for tail lots and $4@4.25 for the more desirable grades, and nothing to better advantage was in evidence during the remaining months. The following table shows the high and low levels of Bourbon beans in the local market during the last few years:—

BOURBON BEANS.

	Per pound— High.	Low.
1899	$5.00	$4.00
1900	4.50	4.00
1901	4.75	3.00
1902	3.00	2.50
1903	2.50	1.50
1904	1.50	1.50
1905	1.50	1.00
1906	1.50	1.00
1907	3.00	1.25
1908	3.00	1.50
1909	3.00	1.75
1910	3.00	2.75
1911	3.75	2.75

South American beans were in firmer tendency last year, chiefly in sympathy with the influences governing Mexicans and Bourbons. From $2.50 at the opening the South American variety rose steadily to $3.75 by May and the latter figure was maintained over the balance of the year.

Tahiti beans came into much more favorable prestige last year, a condition which is chiefly associated with the effect of the new regulations governing the cultivation, preparation and marketing of this variety. The most material developments affecting Tahitis were experienced during the closing weeks of the year as a result of reduced supplies at the coast and on spot and the keenness of the demand for Hamburg account. Spot prices rose from $1.25 to $1.60. During the earlier months the market had shown comparatively little variation, a range of $1.15@1.25 being generally in effect.

TONKA.

Angustora tonka beans maintained an upward tendency during the greater part of the year as a result of short supplies, the market being often of a nominal character owing to this condition. From $3.75, at the opening, a basis of $4.25 was reached by June. Early in July sales were reported at $4.50, with the market practically bare of stock. Later in the month $5.25 was said to have been realized on a three-pound sale. Limited receipts in August were disposed of at $5.50. This proved the high period of the year, for small and occasional arrivals over the last few months caused a reaction to $5.

The market for Para and Surinam beans has been practically depleted during two-thirds of the year. The former variety became available at $2.75 in September, and with further receipts a $2 basis prevailed in December. No Surinam beans were in evidence until November at $3.50, but at the close of the year $2.50 was named on additional arrivals.

Berries.

CUBEBS.

The market for cubebs was subjected to no material price developments during 1911 and the only variation was occasioned during the first month, a slight easing as a result of keener selling on better supplies. Ordinary berries yielded from 44c. to 42c. and XX and powdered from 46c. to 44c. The course of the market during the balance of the year was generally steady under the influence of the primary situation. Dealers experienced difficulty in securing the more desirable qualities for distilling purposes.

JUNIPER.

Opening quotations for juniper berries were 2½@3c., from which no change was noted until April, when dullness caused a shading of the inside figure to 2¼c. During the summer a firmer tone developed under the influence of crop reports and by the end of August a 3¾c. basis prevailed. Crop advices assumed a more unfavorable tenor during September, both as to quantity and quality, and the import cost was placed in excess of the spot parity. The local market rose to 3@3½c. The inside figure was raised to 3¼c. by the middle of October, but toward the close of the month there was a recession to 3c. On arrivals of new goods, and under the same influence, 2¾c. became available in November. Old berries commanded a premium on account of their more desirable quality and sales were regularly reported at 3½c. In December there was a clearing of some of the cheaper lots of new berries on the market and the inside figure became 2⅞c., old goods being held at 3½c.

OTHER BERRIES.

Values for prickly ash berries were in sharply advancing tendency during September and October owing to materially reduced supplies. The market during the earlier months had continued on an even course at 20@25c. By the middle of September an improved inquiry emphasized the shortage and a 25c. basis was established, and with a continued good demand the market reached a 45c. level by the close of the month. October developments proved of more material significance with apparently no prospect of relief from the spot stringency and everything below 85c. had been taken toward the end of the month.

Saw palmetto berries were under strenthening influences during the first three months of the year, the practical failure of the previous crop occasioning a marked scarcity of supplies. From 8c. at the opening, there was a steady gain to 22c. early in April, with sales lending regular support to the market. Later in the month there was a revision to 21c., from which no further variation was noted.

Essential Oils.

ANISE.

There was an almost steady appreciation in values over the year, but the most substantial gains were scored during the later months. Opening at $1.15, the market was without quotable change until April, when a firmer position for shipment was reflected on spot by an advance to $1.17½. Conditions were uneventful until October, when the outbreak of the political disturbances in China became a factor of market significance. The month closed with $1.40 a ruling quotation. In November there was a temporary relaxation of the primary situation and on spot $1.35 became available. The higher level was restored the following month upon reduced stocks.

BAY.

This oil has been in short supply during nearly the entire year and values were in upward tendency from $1.99 to $3 by October. The dominating condition was somewhat relieved during the last few weeks, causing a revision to $2.75.

BERGAMOT.

The course of this essence was generally bullish over 1911 and the highest point since the extreme values following the seizure disturbance in the producing country of December, 1908, was reached late in the year under review. Light available supplies and the force of primary conditions summarize the ruling factors in the local market. At the opening of the year $3.85@4 prevailed. Before the close of January $3.75 became available on arrivals. February brought a check to the easing course in a firmer demonstration for primary shipment and $3.80 was maintained as an inside quotation. Freer arrivals of the new crop featured March and there were sellers again at $3.75. The next changes came in May, advances to $4.10, under the keener primary influence, supplies abroad being more strongly controlled and the factors taking every advantage of the position, so that prices for import were generally considerable above the spot parity. There was also talk that the flowering of the new crop had been threatened to add to the bullish flurry. Early in June the local market was on a basis of $4.25@4.50, and some dealers withdrew, awaiting the further response of values to the strength abroad. July developments continued of the same bullish character, and by the close of the month $4.60 was the best available basis. A good demand had prevailed on spot and supplies were unusually light. The market maintained its firm status over the next few weeks, but without quotable change, although the range was extended to $5, as representing the more bullish views. In September came reports of a pessimistic character as to the crop, and offers for future shipment were practically in abeyance. On spot $4.75 was a minimum quotation and with the shortage of stocks brought to a keener realization, values continued to climb over the balance of the year, closing at $5.50. Primary supplies were reported cleared and the prospects were for a late and deficient yield of new oil. A monthly summary of high and low prices during the last four years follow:—

	1908. H.	L.	1909. H.	L.	1910. H.	L.	1911. H.	L.
Jan.	3.50	3.50	13.50	7.50	3.75	3.65	3.85	3.75
Feb.	3.15	2.90	8.00	5.00	4.00	3.75	3.80	3.75
March	3.15	2.90	5.00	4.50	3.87	3.87	3.80	3.75
April	2.80	2.75	4.50	4.35	3.85	3.70	3.75	3.75
May	2.85	2.85	4.25	4.15	3.70	3.65	4.10	3.75
June	2.90	2.85	4.15	4.00	3.65	3.65	4.25	4.10
July	3.20	3.00	4.00	4.00	3.65	3.50	4.60	4.25
Aug.	3.40	3.25	4.00	4.00	3.50	3.50	4.60	4.60
Sept.	3.15	3.15	4.00	4.00	3.50	3.50	4.75	4.60
Oct.	3.10	3.10	4.00	3.65	3.50	3.50	4.85	4.75
Nov.	3.00	2.90	3.65	3.65	3.75	3.50	5.50	5.25
Dec.	2.90	2.90	3.65	3.65	3.85	3.75	5.50	5.50
Year	3.50	2.90	13.50	3.65	4.00	3.65	5.50	3.75

CASSIA.

The developments of the first few weeks of the year were the most interesting and contributed most materially to the market. In February a sharp advance was scored from $75 to $1 for technical 75@80 per cent. in response to a flurry in the primary market. Various theories were associated with the movement, the interruption to shipments from China as a result of the plague, the existence of short interests and the consequent speculative tactics, with a view of embarrassing their caring and the unfavorable condition of the crop. Very little oil was in evidence for shipment, and 4s. 3d. was a reported basis, representing an advance of about 25 per cent. from the low level reached during the depression of several months previously. Early in March there were indications of a reaction abroad and the local market reflected the influence, declining to 90c. April brought a further recession to 87½c., under the effort of keener competition. Prices were nominally unchanged until August, when freer offers for shipment occasioned a decline to 82½c. There was nothing to vary the course of the market until October, when the Chinese rebellion furnished another bullish feature and 95c. became the ruling spot basis. This could not be maintained in the face of a freer disposition to sell abroad, which was manifested in November and December, and the market closed at 90c. The lead-free product opened at 95c., rose to $1.15 in February and closed at $1. For redistilled oil $1.20 prevailed at the opening. At the height of the flurry abroad it reached $1.35 in February and closed at $1.25.

The relatively high level of the market for technical oil is shown in the following table of comparative prices for the last four years:—

CASSIA OIL, 75 TO 80 PER CENT.

	1908. H.	L.	1909. H.	L.	1910. H.	L.	1911. H.	L.
Jan.	1.55	1.30	1.15	1.12½	87½	87½	75	75
Feb.	1.30	1.30	1.10	1.05	87½	87½	1.00	75
March	1.30	1.30	1.05	1.00	87½	87½	95	90
April	1.30	1.15	1.00	1.00	87½	85	87½	87½
May	1.15	1.10	1.00	95	85	82½	87½	87½
June	1.10	1.10	95	95	82½	80	87½	87½
July	1.05	1.05	95	90	80	80	87½	87½
Aug.	1.20	1.05	90	90	80	80	85	82½
Sept.	1.25	1.20	90	87½	80	80	82½	82½
Oct.	1.25	1.20	87½	87½	80	80	95	82½
Nov.	1.25	1.20	87½	87½	80	80	95	92½
Dec.	1.20	1.15	87½	87½	80	75	90	90
Year	1.55	1.15	1.15	87½	87½	75	1.00	75

CEDAR LEAF.

There was a steady reaction last year from the high level reached in 1910, as a result of relief from the scarcity which marked the previous year's developments. From 75c. at the opening of 1911 the market yielded gradually to the influence of arrivals and 45c. was in effect at the close.

CITRONELLA.

This oil followed rather an uneventful course over 1911, and the general movement was disappointing to the trade. There was a slight easing from 24c. to 23½c. in drums early in February, but before the close of the month the higher basis was restored on a firmer manifestation in the primary market. Under a similar influence 25c. prevailed in July and coupled with a more active demand in August, a 26c. basis was established. Later in August competition developed a keener degree and 25c. was again in effect, remaining current over the rest of the year.

CLOVE.

Prices were upward over the early weeks of the year in sympathy with the spice market and cans reached a $1.05 basis by February, 10c. over the opening quotation. From this point the tendency was downward until 95c. prevailed late in June. By August the spice stiuation contributed a more favorable influence on oil and the higher level was again established. Over the last four months there was no check to the reactionary course of the market, spice being subjected to generally bearish conditions and 82½c. was the closing quotation for oil.

LEMON.

A revision of this market for 1911 comprises many interesting features, involving a wide range of price changes, a margin of more than one hundred per cent. marking the high and low points of the year. The tendency was generally upward and the closing basis was subsequently in excess of the opening. January developments were bullish on reported short interests in the primary market and the backwardness of the new crop, and spot values rose from 80 to 85c. February brought a keener demonstration of the force of speculative tactics abroad, stimulated by reports of damage to the fruit by frost and of labor troubles in the pressing districts. The import cost was placed at more than $1. By the close of February spot oil was held at 95c. Better arrivals eased the local market in March to 85c., but the effort was counterbalanced by another speculative flurry and a 90c. basis was restored by the end of March. April witnessed the realization of a dollar market on spot. Receipts of new oil had not been up to specifications and fairly active buying was occasioned in the local trade. During May prices maintained their buoyant trend, touching $1.17½. The same degree of firmness characterized the primary situation and a sale of 1911 oil was reported at a sharp advance. A $1.25 level was established early in June, and heavy sales of new oil constituted a feature of primary advices. About 3,000 coppers were said to have been engaged at about $1. Later in the month offers for new shipment were practically withdrawn and difficulty was experienced in securing anything for prompt shipment, available supplies being strongly controlled. July seemed to emphasize the bullish trend of the speculative influences and short interests were reported making a more heroic attempt to liquidate on the hopelessness of their position, available stocks being almost depleted. On spot $1.45 ruled at the close of July and early August brought a $1.50 market. Interest in the new crop for local account was increasing, at a level of $1.25, as compared with 72½c. at the opening of the previous season. By the middle of September the high level of the year was reached on spot at $1.65. At this time primary quotations were $1.30 for new crop and $1.80 for current shipment. Toward the end of October the local market received its first setback on the freer disposition to sell for forward shipment and the keener incentive to realize on spot. There was a decline to $1.60, and the downward course of the market continued over the balance of the year on intensified selling in anticipation of new supplies. Second hands were particularly keen to turn their surplus stocks to profitable account. The closing basis was $1.40.

The summary of high and low quotations for lemon for each month during the last four years follows:—

	1908. H.	L.	1909. H.	L.	1910. H.	L.	1911. H.	L.
Jan.	1.45	1.25	3.00	1.50	77½	75	85	80
Feb.	1.25	1.25	1.40	1.10	77½	77½	95	85
Mar.	1.25	1.15	1.00	90	82½	77½	90	85
Apr.	1.00	95	87½	85	82½	77½	1.00	90
May	95	90	85	80	80	77½	1.17½	1.15
June	80	75	80	75	80	77½	1.25	1.17½
July	85	75	80	80	80	77½	1.45	1.30
Aug.	85	85	80	80	77½	77½	1.50	1.45
Sep.	80	80	80	75	80	77½	1.65	1.50
Oct.	80	80	75	72½	80	77½	1.65	1.60
Nov.	80	75	72½	72½	80	77½	1.60	1.45
Dec.	1.50	70	72½	72½	80	77½	1.45	1.40
Year	1.50	70	3.00	72½	82½	75	1.65	80

A record of high and low prices by years from 1898 to 1907 follows:—

	H.	L.		H.	L.
1898	95	65	1903	70	55
1899	80	65	1904	55	50
1900	1.00	75	1905	57½	55
1901	1.15	80	1906	1.20	57
1902	80	65	1907	2.00	1.00

ORANGE.

Of primary consideration in the treatment of this product for 1911 is the settlement of the prolonged and vexatious duty question last June in favor of the importer at the rate of 25 per cent. ad valorem, as an essential oil rather than at the tax of one dollar per pound under the classification of fruit ethers, oils or essences, as contended by the government. This question had been subjected to the most annoying delaying tactics on the part of the officials, who brought to their cause every possible pretext to confuse the issue and to check the fulfillment of justice for nearly two years. The year under review opened with $2.20 in effect, from which the market rose to $2.25 in January, as a result of a higher level abroad. No further change was noted until April, when an easing to the lower figure followed more of a disposition to discount the outcome of the tariff case as the 25 per cent. basis. A primary flurry occasioned an upward movement on spot to $2.30 by July. News of the settlement of the duty case caused no setback to the local market, as the outcome in favor of the lower rate had been freely discounted, and the force of the dollar duty had seldom, if ever, been actually reflected as the market figures. The primary situation was decidedly firmer, following the removal of the duty uncertainty, which stimulated the demand for import and emphasized the effect of the light primary stocks. During July an advance of 50@60c. was reported abroad, and at the close of the month $2.45 prevailed on spot. By August a $2.60 level was maintained, following the bullish trend abroad. Primary stocks were reported almost nil and offers for futures were withdrawn on advices that drought and heat had threatened the new fruit crop.

PEPPERMINT.

The year under review has marked an appreciation of about 25 per cent. in the value of peppermint on the local market, the statistical situation having undergone material improvement and being regarded as the soundest since 1903. The 1910 crop amounted to about 210,000 pounds, and the holdover stocks to September, 1910, were reckoned as 90,000 pounds. The previous yield reached 208,000 pounds, with holdover supplies comprising about 120,000 pounds. Under the more favorable conditions bulk oil was steadily upward during the early weeks of the year, from $2.25 to $2.90 by early March. Country advices sounded an unpropitious note, concern being expressed that the open winter had damaged the roots. In April the primary market showed an easier ten-

dency, and there were prospects for an increased acreage by 25 per cent., although the gain, it was held, might be counterbalanced by the material reduction in the holdover stocks which had played an important part in the crops of the last few years. On spot $2.85 was named and with more of a disposition to anticipate the favorable outcome of the new crop in May there was a further yielding in prices to $2.65. By August $2.90 prevailed on spot. A slight reaction from the high level reached as a result of the speculative conditions in the country position was reported in September, but there was no appreciable abatement of the spot market. By October the crop was reckoned as about 240,000 pounds, with holdover stocks of 15,000 pounds, as compared with an aggregate of 300,000 pounds available at the same time a year ago. With better supplies of new oil in October competition was stimulated and $2.87½ was in effect. A further easing to $2.85 was occasioned in November, and the year closed on this basis. Prices for bottled oil have been in corresponding tendency with those for bulk, rising from $2.75 to $3.35 by August. The feature of the market for bottles has been the active scope of the export movement. High and low quotations for bulk peppermint for the last four years are summarized as follows:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan...	1.60	1.60	1.45	1.45	2.00	2.00	2.45	2.25
Feb..	1.65	1.60	1.45	1.45	2.00	2.00	2.85	2.45
March	1.65	1.65	1.50	1.50	2.00	1.95	2.90	2.80
April.	1.65	1.55	1.50	1.50	1.95	1.90	2.90	2.85
May..	1.55	1.55	1.50	1.50	1.90	1.85	2.85	2.65
June.	1.55	1.50	1.50	1.45	1.85	1.85	2.70	2.65
July..	1.45	1.45	1.45	1.45	1.85	1.80	2.85	2.70
Aug..	1.45	1.45	1.50	1.50	2.05	1.80	2.90	2.85
Sept..	1.45	1.45	1.75	1.50	2.20	2.15	2.90	2.90
Oct...	1.40	1.40	1.90	1.75	2.25	2.20	2.90	2.87½
Nov..	1.40	1.40	2.00	1.90	2.20	2.15	2.87½	2.85
Dec..	1.40	1.40	2.00	2.00	2.25	2.15	2.85	2.85
Year.	1.65	1.40	2.00	1.45	2.25	1.80	2.90	2.25

	H.	L.		H.	L.
1892..	2.75	2.45	1900.	1.10	.80
1893.	2.50	2.15	1901.	1.80	1.10
1894.	2.45	2.15	1902.	4.75	1.70
1895.	2.45	1.40	1903.	4.75	2.20
1896.	1.85	1.50	1904.	3.75	2.65
1897.	1.70	1.20	1905.	3.45	2.25
1898.	1.40	.90	1906.	3.00	2.25
1899.	.90	.80	1907.	2.35	1.55

ROSE.

Materially higher prices were established for natural Bulgarian otto of rose last year, as an incident to advices of crop shortage, but the returns from so-called official quarters present a diversity that practically no significance is attached to crop news. Three of these comparisons are shown in the following table:—

	Kilos.	Kilos.	Kilos.
1910.	3,125	2,226	2,560
1911.	2,601	1,864	2,581

From $6.75 to $7.25, as the prevailing basis for leading brands at the opening, the market was without particular interest until June, when the reported uncertainty of the crop prospects caused an advance to $6.75@8.25. At the close of July $9.75@10.50 for the more favored brands was named, but others were available at $8@9. The same wide range prevailed over the balance of the year.

SASSAFRAS.

Prices for natural oil were firmer over the first two months of the year, from 70c. to 75c., as a result of light supplies, but with spring this condition began to be relieved and there was a reaction to the opening quotation. As the year neared its end, there was a further revision in buyers' favor to 65c. Artificial oil rose from 27c. to 30c. by early February under the influence of the basis material and no further change was noted until September, when there was a reaction to 29c.

SPEARMINT.

The market for spearmint oil scored a substantial advance last year, chiefly as a result of light spot stocks and the early movement of the new crop. There was a steady appreciation over the first three months from $2.75 to $3.15, the first setback being occasioned in April to $3, owing to a lull in the demand. Late in July the market responded to the strengthening course of primary values, the new crop being well reported sold for consuming account and $3.10 became the best available spot basis. August brought a flurry to $3.75 on the tightness of the country situation and early in September $4 ruled on spot. The lightness of spot holdings was emphasized during October, when country supplies were reported practically cleared and nothing was in evidence below $4.25. Under similar conditions a basis of $4.35@4.50 was established in December.

A summary of high and low prices during the last three years follows:—

SPEARMINT OIL.

	1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.
January	2.60	2.60	1.75	1.75	2.85	2.75
February ..	2.60	2.60	1.75	1.75	3.00	2.85
March	2.60	2.60	1.75	1.75	3.15	3.00
April	2.50	2.50	1.75	1.75	3.15	3.00
May	2.50	2.40	1.75	1.75	3.00	3.00
June	2.40	2.25	1.75	1.75	3.00	3.00
July	2.25	2.00	2.00	1.80	3.10	3.00
August	1.75	1.60	2.50	2.00	3.75	3.10
September...	1.60	1.50	3.50	3.00	4.00	3.75
October	1.50	1.40	3.50	3.20	4.25	4.00
November ..	1.75	1.50	3.20	2.75	4.25	4.25
December ..	1.75	1.75	2.75	2.75	4.35	4.25
Year	2.60	1.40	3.50	1.75	4.35	2.75

WORMSEED.

Opening at $4.50, the market was unchanged until late March, when an improved demand emphasized the effect of light supplies, and $5 was a ruling figure. The general conditions were without material development until late September, when early arrivals of the new crop caused a decline to $4.50. The downward course was unchecked until $3.75 was reached by the middle of October, but before the close of the month a $4 basis was again established, with a reaction in the primary situation. During the last few weeks of the year values gained steadily, on the poor prospects for augmenting the light spot stocks, the bulk of the crop having been engaged for consumption. At the close $5.25 prevailed.

OTHER ESSENTIAL OILS.

Other changes among the essential oils during 1911 included the strengthening of geranium rose from $3.75 to $5 for African, from $3.25 to $3.50 for Turkish, and from $3.50 to $4.75 for Bourbon, following the trend at primary quarters; the easing of cubeb from $3.75 to $3.40, in sympathy with the course of berries, as well as keener competition; the upward movement in lavender flowers from $1.85 to $2.50, representing the cheaper products, under the influence of conditions affecting the new crop, which was reported short; the firming of lemongrass from $1.35 to $1.75 on scarcity and the primary influence; the enhancement of croton from 85c. to $1.10, the market being in very short supply the greater part of the year; the advance in South American petit grains from $2 to $2.75, chiefly as a result of scarcity caused by political disturbances in the producing country. There was a revision early in the year in natural wintergreen (birch) from $1.40 to $1.35, although synthetic was slightly firmer from 33c. to 34c., reflecting the influence of the baser material. Safral was a trifle lower from 36c. to 35c., on lack of demand. Tansy rose from $2 to $2.10 on limited stocks.

Flowers.

ARNICA.

Prices were in general firmer tendency during the year, particularly during the summer, when advices of a curtailed production as a result of continued drought prompted the upward movement in the local trade. During the first few months of the year spot prices fluctuated within a range of 10@10½c., but on the receipt of the bullish advices from the producing districts a 13c. level was established early in September. December brought a reaction to 12c., in consequence of arrivals.

CALENDULA.

Values for this article scored a 100 per cent. advance last year, the principal factor for the material increase being the disappointing outturn of the crop, due to drought. During the early part of the year the market had fluctuated between a range of 25c. and 30c., and the sharp upward movement did not materialize until early fall, when repeated manifestations of unfavorable conditions abroad and the well sustained extent of the demand brought a 55c. market by October. Later in the year sales were reported at 60c.

CHAMOMILES.

The feature of 1911 developments in chamomiles was the strengthening of Roman from 16c. to 27c. by October. The first material change was occasioned in August on reports that the crop had been a practical failure, and a 25c. basis prevailed in the local trade.

Hungarian flowers underwent very little change last year. There was a decline from 14c. to 12c. in February, owing to the lack of demand, but a firmer tone in May on the unpropitious crop prospects, and 14c. was named for June-August shipment of good quality flowers. By July new flowers became available at 13c., while 11c. was named for old stock. The only other change during the year was an easing of old flowers to 10c., 13@15c. being maintained for the more desirable new.

SAFFRON, AMERICAN.

Quotations for American saffron were subjected to rather frequent fluctuations during the year, and the market was the occasion of some rather interesting developments. Opening quotations were 19@20c. Toward the end of the first month a decline to 18c. was noted on dull trading, but in February the available supply became more closely concentrated with the result of a 25c. market. By the end of the month there had been a reaction to 24c., but the higher level was again reached early in March on keener buying. From this point the market followed a steady downward course under the influences of a quiet demand and sharp competition until a level of 20c. was reached late in April. Early in May the market was again under better control, and prevailing quotations were 22@25c. No material change was noted until September, when a more active demand emphasized the comparative lightness of available stocks and a 25c. market again prevailed. The market rose gradually from this point as supplies came under a closer concentration, and a lack of arrivals strengthened the position of the few holders so that a 33c. basis was in effect by October. December brought a maintenance of the upward tendency on an improved demand, so that 33c. represented the highest as well as the closing figure of the year. The following table shows the fluctuations each month during the past five years:—

SAFFRON FLOWERS, AMERICAN.

	1907.		1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.
Jan....	80	80	30	25	23	23	35	32	19	18
Feb....	72½	80	25	25	23	23	32	30	25	20
March..	70	64	25	22½	23	23	30	27	25	24
April...	64	40	22½	20	23	23	30	30	23½	21
May....	40	40	17½	15	23	22	30	25	22½	20
June....	40	38	16	15	22	22	25	25	22½	22½
July....	40	40	20	17	22	22	21	21	22½	22½
Aug....	40	40	20	20	22	22	21	21	22½	22
Sept....	40	35	20	20	22	22	21	19	25	22
Oct....	35	35	20	19	22	20	20	19	30	27
Nov....	35	32	23	19	35	28	20	20	30	30
Dec....	32	30	30	15	35	35	20	18	33	30
Year...	80	30	30	15	35	20	35	18	33	18

SAFFRON, VALENCIA.

No material changes featured this market during the year. During the first three months the course of the market was upward from $10.25 to $10.75 on an improved demand and the receipt of strengthening advices from producing districts. As the spring developed, competition was stimulated and shading practices were a feature of the market. Under this influence there was a recession to $10.50 by July, and with the exception of occasional fluctuations, this basis remained practically in effect during the balance of the year.

Gums.

ALOES.

The market for Curacoa aloes followed rather an even course during 1911. Boxes opened at 7c., declining early in January to 6½c., as the result of sharp competition. In February an improved demand restored the 7c. basis. Anticipating the new crop brought a change to 6¾c. in May, although the prospects were for a limited production and Europe was said to be outbidding the local trade for new supplies. In July the market was on a 7c. basis on an improved demand, and further advances were made until 8c. was reached in September. In October there was a recession to 7¼c. on freer arrivals, and the keener competition on the part of receivers to move them. A steady basis was noted in November at 7½c. and with reported sales in the primary market, by which the new crop had been well cleared, a further advance was scored to 7¾c. in December. The following shows the prevailing high and low prices each month during the last five years:—

CURACAO ALOES, IN BOXES.

	1907.		1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.
Jan...	7	7	8	7	7	7	7	6¾	7	6½
Feb...	7	7	8	7	7	7	7¼	7	7	6½
March.	7	7	8	8	7	7	8	7¼	7	7
April..	7	7	8	7	6¾	6¾	8	7¼	7	7
May...	7½	7	7	6¾	6¾	6¾	8¾	8¼	7	6¾
June...	7¾	7½	6¾	6¾	6¾	6¾	8¾	8½	7½	6¾
July...	8¼	7¾	6¾	6½	6¾	6½	7¾	7½	7	6¾
Aug...	8¼	8¼	6½	6½	6¾	6¾	7½	7½	7	7
Sept...	9	8¼	6½	6½	6¾	6¾	7½	7½	8	7
Oct....	9½	9	6¾	6½	6¾	6¾	7½	7½	7½	7¼
Nov...	10	9¼	7½	6¾	6¾	6¾	7½	7	7½	7¼
Dec...	10	8	7½	7	6¾	6¾	7	7	7½	7½
Year..	10	7	8	6½	7	6½	8¾	6¾	8	6½

Gourd aloes followed a 10c. basis until late in July, when the available supplies became more closely concentrated, resulting in a 11c. basis. Improved sales brought an advance to 12c. by August, and the following month supplies had been reduced to an extent that warranted an increase to 13c. With arrivals of the new crop in November, there were sellers at 12c., which prevailed over the balance of the year.

Barbadoes aloes, an article of comparatively little importance since the operation of the Pure Food and Drugs Act, were held at a relatively high level all of last year, the limited supply being practically in the hands of one seller. There was an advance from 75c. to 80c. by August on the reduction of available supplies, and by the close of October the market was practically bare of whole goods, and 95c. was held for powdered in the principal quarter.

ARABIC.

There was comparatively little change in the market for Arabic, amber sorts, during last year, but the general tendency of the market was firmer. The first change was noted early in February, a decline from 10 to 9½c. under the influence of competition. In March advices of a strengthening market abroad restored the higher figure. The next change was an advance of 1c. in May under the influence of the primary situation. The crop was said to be coming on a bare market with France a heavy buyer as a result of the failure of the senegal crop. The effect of this movement was emphasized in July, and on spot 11½c. prevailed. There was an easing to 11c. late in the year on arrivals. White sorts rose from 14 to 15c. by May, following the trend of the primary market, but toward the end of the year there was a resession of the lower figure.

ASAFOETIDA.

This market was subjected to a series of steady declines last year, chiefly as a result of the change in the attitude of the holders in recognizing the impracticability of the U. S. P. requirement of 50 per cent. rosin test and admitting goods of 35 per cent. test on the qualification that they be labeled to show the extent of variation from the official standard. This modification necessarily tended to facilitate importations, and the effect was noted early in the year by a decline from $1.50 to $1.25 for the cheaper descriptions. Early in June the market was on the $1 basis as the result of the freer offerings. There were complaints in the trade that importations through other ports were more easily accomplished than at the local port, and the goods from out of town quarters came into competition with those on direct importation here. There was occasional difficulty in having goods passed in the local channels, but the market did not seem to miss the lots, available supplies being well up to the light requirements. There was nothing to check the downward trend of values during the balance of the year, and 75c. was accepted for a grade reported to meet the U. S. P. requirements.

CAMPHOR, REFINED.

The local market for domestic camphor was under strengthening development during the first three months of the year, within which period advances were scored from 42 to 49½c. in bulk, with corresponding increases in other packages. The higher trend of values was justified on the force of a stronger market for crude and refined abroad as well as the prevalence of better demand on spot, under which influences a recovery from the low level of the previous year was logical. There were persistent rumors of an agreement between the domestic and Jananese refiners, but whatever bearing this may have had on the market was not of a character to impose particular confidence in the truth of any pact. The keenest developments in the local market were experienced in March, two advances of 1c. each having been announced within a week and followed by 1 to 1½c. a few days later, bringing the market to its high level for the year, 49½c. As spring requirements began to be satisfied, second hands pursued a more vigorous policy of selling against their advantageous contracts, and this influence brought a decline of 1c. late in May. Under a similar condition, emphasized by an easing tendency abroad, there was a further recession during June to 46½c. About the middle of July the market was subjected to a decline of 1½c., and this movement was commented on as having a speculative significance, aimed at foreign refiners. There was no further change until late in September, when prices fell ½ to 44½c. The occasion for this decline was believed to be the keener effect of competition on the part of American refiners against the shipment market for Japan refined. Late in October another decline was associated with a policy to discourage operation in Japanese refined to reach the market in time for the spring operations. By November freer buying in Japan and an advancing tendency in foreign refined abroad imparted a firmer tone to the local market, but prices were without further change. Comparative prices for refined camphor in bulk, by months, are shown in the following summary, covering a period of five years:—

AMERICAN REFINED CAMPHOR.

	1907.		1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.
Jan.....	1.20	1.17	68	68	50	48	45	45	42	42
Feb.....	1.20	1.20	68	66	48	48	45	45	44	43
March...	1.24	1.20	66	62	48	48	45	45	49½	44
April....	1.24	1.24	62	59	48	48	45	45	49½	49½
May.....	1.24	1.24	59	52	48	48	45	45	49¼	48¼
June....	1.24	1.20	52	52	48	48	45	45	47¼	46¼
July.....	1.20	1.05	52	50	48	48	45	45	46¼	45
Aug.....	1.00	97	50	50	48	46	45	45	45	45
Sept....	93	75	50	50	46	46	45	45	45	45
Oct.....	75	75	50	50	46	45	45	45	44¼	44¼
Nov.....	70	68	50	50	45	45	45	42	44¼	44½
Dec.....	68	68	50	50	45	45	42	42	44¼	44½
Year....	1.24	68	68	50	50	45	45	42	49¼	42

OTHER GUM CHANGES.

Other changes of interest during the year under review were a strengthening of Siam benzoin from $1.10 to $1.75 as a result of a scarcity in all quarters; an upward movement in mastic from 46 to 52c. in sympathy with the primary conditions, based on reports of short production; an advance in first Aleppo tragacanth from 78 to 82c. on limited supplies and the upward tendency abroad; a strengthening of guaiac from 20 to 35c. on extreme scarcity, and the easing of gamboge from 65 to 62½c. for pipe and 62½c. to 60c. for broken as a result of sharper competition.

Herbs and Leaves.

BUCHU.

The market for short buchu was subjected to an unusual number of price changes during the year, but the closing price was materially over that in effect at the opening. During the first few weeks of the year prices were chiefly upward, from 75c. to $1.25 by about the middle of February. This strengthening was chiefly due to the tightness of the crop situation, the figures for shipment being frequently in excess of those prevailing on spot. There had been a marked absence of buying interest on the part of local trade at the relatively high prices named in the primary quarter. Before the close of February a reaction was occasioned to $1.20 in the local trade on small arrivals from Hamburg. March brought a continuance of the downward trend, closing at 95c. London and Hamburg had been bearish during this month, and the impression seemed to be gaining ground that the Cape situation was fictitious, new crop goods being held back to create a favorable market. Under these influences there were further declines to 85c. early in April, but later that month, as spot supplies became reduced and the foreign markets evidenced an upward tendency, 95c. prevailed on spot. By May the market was on a $1.10 basis,

following an improved demand. Spot stocks had by this time become materially reduced and closely concentrated, as a result of the continued delaying tactics as to new crop operations. All the unsold parcels in the primary quarter were said to be in speculators' hands, and their ideas were 4s. 6d., while London was on a 4s. 9d. basis. As the summer advanced the foreign markets showed an easier tendency, and there was a quiet shading in spot quotations, although the market stood nominally on a $1.10 basis. In September foreign advices indicated another turn to the situation and with an improved demand prevailing on spot, everything below $1.15 seemed to be cleared. Freer offers from the Cape during October caused a keener realization on spot, so that bale lots became available at $1.06 and broken parcels at $1.10. By November reports of a 75c. shipment basis for new crop goods were current in the trade, and holders were keen to realize in anticipation of cheaper supplies, especially as it was still believed that fairly good parcels of the old crop were still withheld at the Cape. Spot prices were on the basis of 90c., but as the month advanced a firmer development brought the market to 95c., the steadying influence being the skepticism as to the sincerity of the lower figures named for shipment, and there was a growing suspicion that they were of an entirely speculative character. Early in December $1 prevailed in spot on the apparent backwardness of the new crop, but the advance of the month brought a recession to 95c. as there seemed to be more of a disposition to solicit bids for new shipment.

The market for long buchu was in firmer tendency during the first few weeks in sympathy with the conditions governing short, and from 50c. at the opening a basis of 65c. for long prevailed late in February. With the reaction in short the market for long declined to 60c. in March, but May brought a recovery to the higher position on light supplies. This condition was emphasized during June, when an advance to 75c. was noted, but lower cost arrivals marked the balance of the year. Prices were in steady reaction, closing at 55c.

High and low prices for short buchu for the last three years follow:—

BUCHU, SHORT.

	1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.
January	24	24	75	65	90	75
February	26	25	65	55	1.25	1.00
March	30	27	55	50	1.20	95
April	31	30	65	50	1.00	90
May	35	31	80	75	1.10	1.10
June	35	35	85	80	1.10	1.10
July	35	35	1.25	90	1.10	1.10
August	38	35	1.60	1.50	1.10	1.10
September	38	38	1.65	1.60	1.15	1.06
October	38	38	1.50	1.00	1.10	90
November	41	38	1.00	80	95	90
December	75	42	70	60	1.00	95
Year	75	24	1.65	50	1.25	75

BELLADONNA.

There was an easing in prices from 16 to 15c. by August, owing to arrivals, but a recovery to a higher level was occasioned toward the end of the year, under the primary influence.

CANNABIS INDICA.

The market for cannabis indica tops was subjected to a strengthening movement on advices of increase in the export tax of 8d, and subsequent confirmation of this report. Prices advanced from $1.20 to $1.40 by February, but a reaction marked the next few months, bringing the market to $1.25 by September, from which there was no further change.

DAMIANA.

There was a steady recession in values in this article from 35 to 11c. late in April as a result of arrivals of cheaper goods and still lower offers for shipment. Early in May there was a recovery from 12c. on freer buying, but before the month closed a 10c. basis was in effect on further freer offers for shipment. The market was in occasional fluctuation over the balance of the year under the influence of demand, but closed on a 10c. basis.

GRINDELIA ROBUSTA.

From 14c. at the opening, the market declined to 8c. by August on freer arrivals as well as lower offers for shipment. In September trading was of a more favorable character, and a recovery to 10c. was noted.

MARJORAM.

Values for German marjoram scored a material increase last year from 18½ to 35c. by October. The occasion for this movement was the practical failure of the crop, so that spot supplies were reduced to such proportions as to render the market more or less nominal. French marjoram was in sympathetic tendency, scoring a gain from 9½ to 13c.

SENNA.

Conditions governing the various descriptions of senna were of a fairly steady and even character during the year. Most sensitive to fluctuations was the market for Alexandria siftings. The opening price for this variety was 8½c., from which a decline to 7½c. was noted early in the year. In March a firmer tendency prevailed on freer buying and the absence of offers for shipment, and a recovery to 8c. followed. Arrivals in April caused a decline to 7½c., which prevailed over the balance of the year. Whole leaf was firmer from 20 to 22c. under the primary influence. The market for half leaf was unchanged at 9c. Tinnevelly senna was practically unchanged, over year quotations ranging from 6 to 12c., according to the quality.

YERBA SANTA.

This item declined from 14 to 9c. by June as the result of arrivals and freer offers for shipment, and no further change was noted until December, by which time supplies had been reduced so that holders were able to realize 10c.

OTHER HERBS AND LEAVES CHANGES.

Other changes in herbs and leaves not included in the above review comprise an advance from 8½ to 9c. in henbane, following the primary tendency; an easing from 35 to 30c. in Truxillo coca leaves due to the better supplies; and a decline from 30 to 25c. in euphorbia pil. as a result of freer offers.

Roots.

ALTHEA.

Whole root advanced from 13½ to 17c. by September in sympathy with primary influences. Cut root was higher during the first few weeks, from 15 to 25c., the market being almost bare of supplies. Arrivals brought the market for cut to 20c. by the close of January, but as the available stocks became under close control, values from this point rose steadily to 30c. by April. The situation loosened on arrivals, so that 22c. prevailed by June. The market was in upward tendency again by September as a result of short supplies, and for the limited stock 35c. was maintained in December.

ARROW ROOT.

St. Vincent was higher from 5¾ to 8c. by July on reduced and closely controlled supplies, but with relief from this condition 7c. was in effect by August. The earlier influence again predominated by fall and the market rose to 8c. in November. In the Bermuda variety there was a revision from 50 to 45c. by October.

BURDOCK.

Short supplies caused a steady advance of values over the entire year. From 5½c. the market touched a 10c. basis in September, by which time conditions abroad were unusually bullish on advices that the crop had suffered materially by drought. The increase was steady over the rest of the year, closing at 12c.

GOLDEN SEAL.

From $2.65 the market rose steadily to $3.00 by March, spot supplies being light and well concentrated. During March, however, freer offers from the country caused a reaction to $2.90, but in April the cheaper stocks were cleared and the higher level restored. In May there was further increase to $3.25, the country stocks being reported light and well controlled, and in June, under the same influence, a $3.40 market prevailed. In July spring dug root became available at $3.25, but for the more desirable fall stock $4 was maintained. In September the market touched a $5 level as a result of scarcity at all points. October brought the high mark of the year at $5.50, as the available supply at this time had become almost negligible. There was a recession during the closing months to $4.75 on slightly better supplies and the lack of demand.

High and low prices each month, together with those of corresponding periods in the two years previous, are shown in the following summary:—

GOLDEN SEAL ROOT.

	1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.
Jan.	1.80	1.80	2.00	1.95	2.75	2.65
Feb.	1.80	1.80	2.00	1.95	2.70	2.70
March.	1.80	1.80	1.95	1.95	3.00	2.70
April.	1.80	1.80	2.00	2.00	3.00	2.90
May	1.80	1.80	2.05	2.00	3.25	3.00
June	1.80	1.80	2.05	2.05	3.40	*3.00
July	1.90	1.75	2.05	1.95	3.50	*3.25
Aug.	2.00	1.90	2.15	2.05	4.25	4.00
Sept.	2.10	2.00	2.25	2.25	5.00	4.25
Oct.	2.00	2.00	2.25	2.25	5.50	5.25
Nov.	1.95	1.95	2.30	2.25	5.25	5.00
Dec.	1.95	1.95	2.65	2.35	5.00	4.75
Year	2.10	1.75	2.65	1.95	5.50	2.65

*Spring root.

IPECAC, CARTAGENA.

The opening tendency for Carthagena was easier on a waning demand and freer arrivals, from $2 to $1.75 by April. From this point the market was in steady appreciation during practically the entire year as a result of reduced holdings and the influence of advanced prices for shipment, the high level being reached in November at $2.30.

This variety was also in decline in tendency from $2.20 to $2.15 by March, but in April an advance of $2.35 was justified on the shortness of available supplies. The next change was a decline to $2. in May, owing to new arrivals. The market was practically nominal, owing to the absence of supplies, until late in September, when an arrival was held at $2.25. A further advance to $2.30 marked the balance of the year. A summary of high and low prices by months for Cartagena follows:—

IPECAC, CARTAGENA.

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	1.20	1.20	1.00	1.00	1.05	95	2.00	2.00
Feb.	1.17½	1.15	1.00	1.00	1.10	1.05	1.90	1.80
Mar.	1.15	97½	1.00	1.00	1.50	1.10	1.80	1.80
April.	95	95	1.00	1.00	1.75	1.40	1.80	1.75
May.	1.00	95	1.00	95	1.50	1.40	1.80	1.75
June.	1.00	1.00	95	95	1.25	1.15	1.85	1.80
July.	1.08	1.05	95	95	1.25	1.25	1.85	1.80
Aug.	1.08	1.05	1.00	1.00	1.40	1.25	2.10	1.85
Sept.	1.08	1.00	1.00	1.00	1.45	1.40	2.20	2.15
Oct.	1.05	1.05	1.00	1.00	1.50	1.45	2.25	2.20
Nov.	1.00	1.00	1.00	1.00	1.80	1.50	2.30	2.25
Dec.	1.00	1.00	1.00	1.00	2.00	1.95	2.30	2.30
Year.	1.20	95	1.00	95	2.00	95	2.30	1.75

JALAP.

The opening weeks of the year were marked by a lack of demand that caused a decline from 25 to 22c., but in March values advanced sharply on an active demand, chiefly for export, apparently stimulated by the prevalence of political trouble in Mexico. At that time Hamburg was credited with controlling 90 per cent. of the crop. At the close of March a 40c. market prevailed, a reaction following on better supplies and an abatement of buying interest to 30c. by June. In September the demand was stimulated with a recovery to 35c. Developments during the closing months were of bearish significance, a generally dull market prevailing and the new crop prospects being reported large. At the close they were sellers at 25c.

JALAP.

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	17	16	37½	35	35	30	25	22
Feb.	17	17	25	25	30	25	22	22
March.	17	17	35	25	28	18	40	25
April.	17	17	35	34	18	17	37½	35
May.	17	17	50	40	30	19	35	32
June.	17	17	45	45	35	30	32	30
July.	18	18	45	45	37½	35	30	30
Aug.	19	18	45	45	38	37	30	30
Sept.	22	22	45	45	45	41	35	30
Oct.	22	22	42½	38	45	42	33	33
Nov.	40	22	38	38	42	35	33	32
Dec.	40	37½	38	35	30	25	32	26
Year.	40	16	50	25	45	17	40	22

KAVA KAVA.

As a result of the clearing of the cheaper supplies, the market rose from 35 to 50c. during the opening month, but on freer offers for arrival there was a reaction to 40c. by March, and with the limited demand 35c. was in effect by early April. Later in the month the stock became closely controlled and was maintained at 50c., followed by an advance to 55c. in May. Developments during the balance of the year were of a reactionary character, 36c. being the closing basis.

PAREIRA BRAVA.

Values for this root were subjected to material fluctuations. Opening at 45c., there was an advance to 45c. in April on limited holdings, and by early July, as the stock became under closer control, a 70c. market prevailed. By August the conditions had been accentuated to a degree whereby a 90c. market was the result. Freer offers for shipment from London and Hamburg and the materialization of cheaper goods occasioned a reaction over the balance of the year, closing at 45c.

RHUBARB.

Values for high dried rhubarb were in general firmer tendency last year. Opening at 14c., there was no material change until September, when the primary market influenced a higher level at 15c. Political troubles in the country of origin and the lightness of spot stocks brought the market to a 17c. level by October, followed by a similar tendency to 19c. by November, at which time there had been report of a 50 per cent. advance in the primary market since the outbreak of the political disturbances.

SARSAPARILLA.

Values for Mexican root were more than doubled last year. The opening figure was 9c. In February the supplies came under better control, resulting in an advance to 9½c. April brought a lively flurry, the market being practically in the hands of one house, with the result of an 18c. basis. There was a reaction to 16c., but in May freer sales restored the higher level. A reaction to 14c. by October followed, owing to the slowness of demand, but improved inquiries brought the market to a 16c. level early in October. After a recession to 15c. on freer offers, the market again scored its 18c. position on the control of the spot situation early in December, and before the close of the month 18½c. was maintained in the leading quarter. The high and low quotations each month during the last few years are shown in the following summary:—

	1907.		1908		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	9½	9¼	7⅜	7¼	8	8	9	9	9	9
Feb.	9¼	9	7¼	7¼	8	8	9	9	9½	9
Mar.	9	9	7	7	8	8	10	10	9½	9½
April.	9	8½	7	7	8	8	10	9	18	10⅜
May.	8	7⅜	7	7	8	8	9	8¾	18	17
June.	7⅜	7½	7¼	7	8	8	8¾	8¾	18	17
July.	8	7½	8	7⅜	8	8	11	8¾	17	15
Aug.	8	8	8½	8½	8½	8	10½	10	15	14
Sept.	8	8	8½	8½	9½	8½	10	10	14½	14
Oct.	8	8	8½	8	9½	9¼	10	10	16	15
Nov.	8	8	8	8	9¼	9¼	10	10	15½	15
Dec.	8	7⅜	8	8	9	9	10	10	18½	15½
Year.	9½	7½	8½	7	9½	8	77		8¾	18½ 9

SENEGA.

There was no material change in this market until July, by which time available supplies had become well controlled with Europe a buyer in the local market. The conditions were further strengthened by advices that crop receipts were light with the probability of a shortage in the output. Under these influences holders maintained 52½c., as compared with 42c. at the opening. On the further reduction of stocks by August, 55c. prevailed. With no appreciable relief from the country holders, the market reached a 58c. level by October, and on the firmer tendency in the country and the close concentration of spot stocks, 60c. was in effect at the close. The following table gives the high and low quotations each month during the last five years:—

SENEGA.

	1907.		1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	46	46	48	45	43	43	60	60	43	42
Feb.	48	46	46	45	43	43	60	56	43	43
Mar.	50	50	46	45	43	43	56	56	43	43
April.	50	50	45	45	43	43	56	55	43	43
May.	50	49	45	45	43	43	55	55	42	42
June.	49	49	45	45	43	43	55	50	42	42
July.	49	49	44	40	43	42	47½	47	52½	42
Aug.	50	49	40	35	41	40	47	47	55	52½
Sept.	52	52	35	35	42	41	47	47	55	55
Oct.	52	50	40	46	55	50	45	44	58	55
Nov.	50	50	44	40	60	55	44	44	58	58
Dec.	50	50	44	40	60	60	44	43	60	58
Year.	52	46	48	35	60	40	60	43	60	42

VALERIAN.

Prices for Belgian root were subjected to strengthening influences during the greater part of the year on active trading and the influence of the primary market, so that from 7c. at the opening 13c. prevailed by October. Arrivals in December caused a setback to 12c.

OTHER ROOTS.

Other changes among the roots comprise an advance from 9½ to 10c. in German dandelion on reduced supplies and the firmer tendency abroad; an easing from 17 to 12c. in rhatany on freer offers; an easing from 42 to 36c. in serpentaria under the country conditions; a decline from 25 to 11c. in spikenard on cheaper arrivals and still lower offers from the country; an advance from 30 to 38c. in false unicorn as a result of reduced supplies; an appreciation from 5½ to 7½c. in alkanet, owing to an unfavorable crop and freer spot buying; an advance from 11 to 15c. in culvers, following the country tendency on shortage; and an enhancement from 9 to 10c. in berberis aquifolium, following the tendency of the coast market.

Seeds.

ANISE.

Values for Italian and Spanish anise, which are practically under one recognition in the local trade, were higher from 7¾ to 8¼c. under the influence abroad. Star anise rose from 19 to 20c. by March on reports of a backward crop, but a reaction to 18c. followed by June. Dullness and selling pressure contributed to the downward course of the market until 16¾c. was reached by August. Before the close of that month the situation was better controlled, and on the receipt of firmer advices from the primary market 17¾c. was in effect by September, continuing over the remaining months. There was no material change in Russian seed until October when values rose from 6 to 8c. on the primary tendency as well as the sharp reduction of spot stocks. There was a revision in the buyers' favor over the balance of the year, closing at 7¼c.

CANARY.

Sicily seed rose from 3½ to 4c. by November as a result of reduced supplies. Smyrna was in upward tendency from 3 to 3¼c. by February under the primary influence, declining steadily to 2⅝c. by July as a result of a reaction abroad. The foreign situation again strengthened so that 3⅛c. prevailed by October. Arrivals in November brought the market to 3¼c. In South American seed a rally on the reported failure of the La Platte crop strengthened spot values from 2¾ to 3⅛c. by February, and to 3¼c. by March. A reaction to 2½c. by June followed on lower offers for new crop Smyrna shipment, but before the close of June Smyrna advices indicated damage to the crop, reducing estimates from 200,000 to 100,000 bags. The influence was reflected on the spot values of South American seed, which were at 3½c. in October, closing easier at 3c. on arrivals.

CARAWAY.

There was an easier tendency to this market from 5½ to 5c. by Jul, chiefly under the influence of lower offers for shipment, but in August the primary market assumed a firmer status and a higher level prevailed on spot. By October the market scored an advance to 6½c. on the activity of spot and futures, based on advices that the crop had suffered materially by drought. Arrivals over the balance of the year caused a recession to 5¾c. A summary of high and low prices each month during the last four years is shown in the following table:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan.	10	8¾	9¼	8⅝	6½	6½	5½	5½
Feb.	10	9½	9⅝	9¼	6¼	6½	5½	5½
March.	9¾	9½	9½	9¼	6½	6½	5½	5½
April.	9½	9¼	9½	9¼	6½	6½	5½	5¼
May	9⅝	9½	9	8¾	6¼	6¼	5⅝	5¼
June.	9⅝	9½	8½	8	6½	6½	5⅝	5⅝
July.	9½	9½	8	7⅝	6½	6½	5¼	5
Aug.	9¼	8¾	7¾	7	6½	6¼	5½	5
Sept.	8¾	8½	6⅞	6¾	6¼	6	5½	5½
Oct.	9	8¾	6⅞	6½	6	5¾	6¼	5½
Nov.	8⅝	8½	6½	6½	5¾	5½	6¼	6
Dec.	8¾	8⅝	6½	6½	5½	5½	5¾	5¾
Year.	10	8½	9½	6½	6½	5½	6½	5

CARDAMOMS.

Changes in the cardamoms were principally in decorticated. There was an advance from 65 to 70c. in January under the primary influence as well as the better spot demand, prompted by prospects of a reduced yield. Sharper competition and an easier tendency abroad caused a reaction to 57½c. by June. From this point the market advanced steadily under the more favorable conditions in effect earlier in the year, which restored a 70c. basis. The market for bleached seed, which covers a wide range of prices, owing to the numerous varieties available, was in general upward tendency during the

year, from 50 to 60c. for the cheaper descriptions.

CELERY.

The market for this seed has been subjected to frequent fluctuations during the year, the principal factor being the duty question. There was an easing tendency during January from 17½ to 16½c. on the freer disposition to discount the outcome of the duty question in favor of the importer. A flurry abroad caused an advance to 17c. by March, but the following month came news that the Board of Appraisers had upheld the contention of the protestants that the seed was entitled to free entry under paragraph 559 as a crude drug and overruled the action of the Collector who had assessed it at the rate of 10c. per pound as seed expressly provided for under paragraph 266. Under this influence the market fell to 14c., but in May there was a clearing of the cheaper stocks so that a 15c. market prevailed. Later that month keener selling was again in effect under the duty settlement with sellers at 14½c. After a recovery to 15c. early in June on the increase in the import figures, values went steadily downward to 12c. late in July on the realization policy of spot sellers as well as the influence of the primary market. Late in August an unexpected development influenced the market to a sharp jump to 22c., the factor being the appeal by the government in a case on the duty question, where the statutory period had not elapsed, and again bringing the issue to a state of uncertainty. As a result of freer buying under this condition, a 25c. basis was established early in September. Developments during the remaining months were of a reactionary character. After the duty question cleared in favor of the free entry of the seed, sharper competing tactics prevailed in the local and nearby trades, and the market closed on a 15c. basis. High and low quotations for the last three years by monthly comparisons follow:—

CELERY SEED.

	1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.
January	7¼	7¼	17	17	17½	16½
February	7½	7¼	17	17	16½	16½
March	7½	7¼	17	16½	17	16½
April	7½	7½	16½	16½	17	14
May	7½	7¼	16½	16	15	14
June	7¼	7¼	16½	16	15	14
July	7½	7¼	17	16½	13½	12
August	8	7¾	18	17	12¼	12
September	14	8	20	18	25	22
October	14	13	18	18	23	20
November	16	13	18	17½	20	18
December	14	14	17½	17¼	18	15
Year	16	7¼	20	16	25	12

CORIANDER.

Natural seed declined from 4¾ to 4c. by March, but gained a 4½c. level by May as supplies became reduced. The tendency over the balance of the year was generally easier as a result of arrivals, closing at 3¾c. Bleached seed was higher, from 5¼ to 5½c. by May on light supplies, which condition became emphasized to the extent that the market was practically bare of prime seed by August, when 5¾c. prevailed. Arrivals over the balance of the year caused a recession to 4¼c.

FENNEL.

Large German seed rose from 12 to 25c. by September under the influence of bullish advices from abroad on indications of damage to the crop by drought, the lightness of spot stocks and the improving extent of the demand. Before the close of the month there had been a reaction to 22c. but sales during October contributed a steadying influence, and by early November the market was on a 24c. basis. Arrivals during December caused a setback to 18c. Small German seed was easier from 10 to 7¼c. early in the year, but recovered the higher level by November under the influence of large seed.

LARKSPUR.

Bullish developments marked the first three months of the year from 50 to 90c., the market being almost bare of supplies. After a reaction to 70c. by July, values scored a very sharp advance to $1.50 by August and to $1.75 early in September. The effect of the shortage being emphasized by a more active demand. Sales during October were effected at $1.75, clearing the market of all the desirable grades of seed. By November $1.90 became the best available basis, but from this point the market developed a more irregular status with declines noted to $1.30 by the close of the year.

POPPY.

All descriptions of popy seed rose materially last year as a result of the limits upon the available supplies, due to the unfavorable crop conditions by drought. German advanced from 6½ to 12c., and Dutch from 7 to 13c.

QUINCE.

Quotations for this seed were more or less irregular last year owing to the wide distinction as to quality. The opening range was 58 to 75c. By February 60c. became the inside figure, and as the year advanced values were upward from 65c. for the cheaper to 85c. for selected red cape.

WORM SEED.

Levant seed gained steadily in strength last year, from 13 to 19c. by late October. Heavy sales had been reported at intervals over the year, and in October the demand assumed its keenest stage on prospects of crop failure. American seed was practically unchanged during the year at 6c.

OTHER SEED CHANGES.

Cummin declined from 8 to 6½c. for Malta, and from 7½ to 6½c. for Levant as a result of freer supplies; fenugreek was firmer from 2¼ to 2½c., principally on the effect of Moroccoan troubles; mustard seed was on a generally steady basis last year, the only revisions noted were in Barry brown from 7¼ to 6¼c., in California brown from 6¼ to 6½c.; in English yellow from 4¼ to 4c.; sunflower was slightly easier from 3¾ to 3½c. on arrivals; sabadilla was firmer from 12 to 15c., chiefly under the influence of the primary situation; dill was in easing tendency, from 7 to 4¾c.

Spices.

CASSIA.

The market for China cassia furnished the principal development last year so far as price changes were concerned. Case goods were lower from 9¼c. to 9c. in February on freer offers for shipment, but owing to an improved demand in the spring a 9½c. basis prevailed in May. A slackened demand had an easing effect during the summer, when 8½c. was reached. With the fall came freer buying, contributing a firmer tendency to the market which was emphasized on the news of the outbreak of troubles in the country of origin, establishing the market at 8¾c. by November. Extra broken cassia was downward from 7½c. to 6¼c. by the close of July, as a result of dull trading, but with improved inquiries and the effect of the troubles in China, the market was restored to a 6¾c. basis by November. Saigon rolls were upward from 42 to 50c. by July, as a result of short supplies and the influence of the primary market. There was a reaction during the last few months of the year in consequence of freer supplies and sharp competition, the year closing at 39c. Cassia buds were in depreciating tendency, from 22c. to 17c. by July, reflecting the force of lower offers for shipments as well as the sharpness of local competition. Batavia No. 1 was firmer from 17c. to 17½c. by October, owing to a more active demand and reducing supplies below the expectations of the trade. Short stick was slightly easier from 14c. to 13½c., as was Batavia No. 2, from 12c. to 10½c., by June the demand having been generally backward.

CHILLIES.

This market presented a generally quiet appearance during the entire year, and with fairly good supplies available, the tendency was gradually easier from 12¾c. to 12c. for Japan, and from 12c. to 11¾c. for Mombasa.

CINNAMON.

Advances in values were the rule of this market throughout the year for all descriptions. The occasion for the enhancement has been the limitation on available supplies, with no apparent relief in evidence from the producing districts. Reports have been current that the returns from rubber and tea were more remunerative than those from cinnamon. The course of the year was marked by advances from 20c. to 27c. in No. 1, from 19c. to 26c. in No. 2, and from 18c. to 25c. in No. 3.

CLOVES.

The market for Zanzibar cloves was under keen speculative influences during 1911 and prices were in frequent fluctuation, the net movement showing a depreciation. In January values were higher from 15½c. to 16c., as a result of freer trading and the influence of primary conditions. The current crop was estimated at 45,000 bales, of which 25,000 bales had been shipped, whereas the previous crop amounted to about 120,000 bales. Of the current outturn it was believed that Bombay would take the bulk, as the actual consumption for that market was about 35,000 bales. February brought a decline to 15¾c., as the result of light trading and pressure to move dock goods, causing a decline to 15½c. late in March. April brought a recovery to 15¾c. on the clearing of the more urgent parcels. This basis was said to be materially under the cost to import. Lower offers for new crop shipment in May caused an unsettled and irregular market on spot, 15¼@15½c. being the nominal range. The operation of bearish tactics was the feature of the market during June and under this influence the spot basis fell to 14½c. In July the bulls seemed to have the better end of the argument, and on their squeezing tactics, together with prospects of a late crop, a 15½c. market prevailed here. August brought a further firming of the situation, the demand being stimulated and supported by strong cable advices. Speculation was more of a feature of current trading, and sellers were able to command 17½c. by the close of August. Crop estimates at this time were very complicated, but the indications seemed to point out a heavy yield, 150,000 bales or more. In September the market became more irregular on speculation in futures, and the developments were regarded as of a wildcat character. The exceptionally heavy extent of sales against the new crop constituted the principal factor of speculative significance, and under this influence there was a reaction to 17c. Before the close of the month the market was destined to touch its high point during the year, 19c., the flurry having its foundation on the reduction of available supplies to almost nothing, although nearby arriving goods were quoted at 16c. With October came a break from this level, chiefly under the influence of the bearish speculative tactics, reinforced by cheaper arrivals, so that 16c. became available at the close of the month. November contributed to the declining course of the market, chiefly on the materialization of cheaper goods, although the demand was of a character to keep them moving pretty regularly in the channels of consumption. By the close of November the market rested on a 13¼c. basis. There was no check to the decline though futures were reported in firmer clining tendency during December, although the tendency, the year closing at 12c. Speculation was still rampant, and the situation had become so involved that trading was limited to practically the merest requirements. The following summary of the highest and lowest points reached during each of the last twenty-six years may be of interest:—

ZANZIBAR CLOVES.

	High.	Low.		High.	Low.
1911.....	19	12	1899.....	8	6¼
1910.....	15½	10	1896.....	5¼	4
1909.....	11½	9½	1895.....	6½	4
1908.....	12	10	1894.....	7	4½
1907.....	18½	11	1893.....	10	4¾
1906.....	15	13	1892.....	8	5
1905.....	14½	8½	1891.....	9½	6½
1904.....	19	13	1890.....	13	7¾
1898.....	8¾	5¾	1889.....	21½	10¾
1897.....	6¼	4¾	1888.....	23	13
1900.....	9	6¾	1887.....	27	20
1903.....	10½	7½	1886.....	27	12¾
1902.....	9	8	1885.....	13	10
1901.....	9½	7 3-16			

GINGER.

All grades of gingers were in easier tendency last year. The widest fluctuations were experienced in African. There was a decline in this variety from 11½c. to 7½c. by March. There had been an uninterrupted recession in shipment values since the opening of the new crop and by early March figures were 30 per cent. below the initial quotations. The early reports had indicated a short yield, but this was believed to have been inspired, for the weakening course of the market was generally associated with a crop of heavy proportions following the high prices of 1910. Before the close of March, however, there was a check to the easing tendency of the local market with the absorption of the cheaper goods, so that 7¾c. became the inside quotation. The upward course was maintained in April to 8c. on a flurry abroad on reported covering of short interests. After a reaction to 7¾c., owing to dull trading, the market regained its high level on a freer movement for import. There was a steady gain in spot values during October on seasonable demand, at which time the crop was reported as below expectations. During the closing weeks the influence of the new crop situation was reflected in an easing to 8½c. The market for Cochin ginger was downward from 11¾c. to 9c. by July, and no further change was noted until October, when the unfavorable crop outlook restored a 9½c. basis. Japan ginger was also easier, from 10½c. to 8c. by May. Improved demand in October established the market at 8¾c., but the closing developments were of an easing character, so that 8c. prevailed at the year's end.

MACE.

A decided scarcity has characterized the mace market during 1911, and it was difficult to satisfy the wants of the trade with the meager supplies practically over the entire year. Under these conditions steady advances were realized, from 55c. to 60c. in Banda No. 1, from 55c. to 60c. in Penang No. 1, and from 53c. to 57c. in Penang No. 2.

NUTMEGS.

The market for nutmegs was under generally favorable conditions during the year with advances scored in all varieties. From 11½c. for 105s@110s at the opening, there was a decline to 11¼c. early in the year on freer offers, but before the close of January good trading had established the market at 12c. Spot scarcity brought a further appreciation to 12¾c. early in February, but competition later caused a setback to 11¾c. The market was without particular interest until September, when the demand was stimulated on much firmer advices, the visible supplies here and abroad being reduced on the light crop prospects, and holders were able to maintain 13c. As the demand improved in October, and with sparing offers in evidence from the East, the high level of the year was reached at 14¾c. The close of the market for 75s@80s has been similar to that for the cheaper variety. The former opened at 14c., reached their high level at 15½c. in October, and declined subsequently to 14¾c. Grinding grades were materially higher last year as a result of short supplies. The market rose steadily from 9c. to 14¾c. by October. The later developments contributed to buyers' interests by a recession to 14c.

PEPPER.

The pepper market developed unusual strength last year and the ruling conditions maintained speculative interest to an unusually acute stage throughout the period, contributing materially to the more interesting features of the market. Treating first Singapore black as the item of leading interest, we find that 8c. prevailed at the opening, with the strengthening conditions abroad contributing their influence. By March 8½c. prevailed with the market well cleared of the cheaper speculative holdings and good grades in limited supply. April brought a 9c. market, while 9⅜c. prevailed at the close of May on the maintenance of the demand. Early in June 9¾c. was in effect on the active extent of buying as well as under the keener force of speculation. At this time London was said to hold the whip hand and played the leading role in the speculative movement. The effect of these conditions was emphasized as the spot supplies reached an unusually low level, and by the middle of September the market was on a basis of 11⅞c. Lower offers for shipment were reflected in a reaction on spot to 11c. late in November. The bullish factors were again to the fore in December, a turn in the foreign situation as well as an improved spot movement bringing the market to the high point of the year, 11½c., which prevailed to the close. Other descriptions of black pepper were under similar conditions as those we have noted in the review of the Singapore market, and a brief summary of the course of values will suffice for their treatment. Acheen opened at 7⅜c., was in generally firmer tendency until September, by which time 10¾c. was in effect. After a reaction to 10½c. in December, the higher level prevailed at the close. The conditions governing Aleppy pepper were emphasized by a shortage of stocks throughout nearly the entire year, and the market for this variety was in steadily strengthening tendency from 9¼ to 13c. by November. A reaction to 12½c. marked the closing week. Lampong values were upward from 7⅜ to 11c. by September. Lower offers for shipment occasioned a decline to 10½c. by November, but 10¾c. prevailed at the close. Tellicherry, which was in unusually short supply last year, commanded steadily advancing prices, from 9 to 13c. by November, which prevailed throughout to the close.

Almost steady appreciation marked white pepper last year. Singapore, which opened at 14¾c., yielded to 13¾c. during the first few weeks, as a result of better supplies, but under the influence of stronger cables and a heavier movement on spot there was a gradual gain to 15¼c. by June. Under the sharper speculative tendency, as well as reduced supplies, the course of the market was upward to 17¼c. by September. Cheaper arrivals in October and November brought the market to a lower level, but in December the demand assumed a more active character, and under the influence of primary advices a 16c. basis was restored. Penang white declined from 12½ to 11¾c. by February, from which point it maintained a steady advance to 16¼c. by September under the influence of stronger cable advices, more active trading and reduced spot supplies. As a result of arrivals during October and November there was a reaction to 14c.

PIMENTO.

From 4c. at the opening, values were in the ascendant during the first three months of the year, the upward movement being associated with the existence of heavy shipping interests for future deliveries, and 4¾c. was in effect early in April. The market followed an even course until October, when advices of crop shortage and of heavy buying for Europe caused an advance to 5c. The visible supplies in the island of production were said to be the smallest in years, and this condition was instrumental in keeping the market in buoyant tendency to 5½c. at close.

Waxes.

BAYBERRY.

A review of this market for 1911 shows an appreciation of almost 100 per cent. as a shortage in the last crop placed a decided premium on available supplies. The force of this condition was experienced chiefly during the latter part of the year. The market had remained, without appreciable variation, around 18c. until September, when lightness of spot stocks became more pronounced on the unfavorable crop outlook and holders of spot goods were able to maintain 24c. From this point the market advanced consistently on sales, reaching 35c. by the close of the year.

BEESWAX.

This market followed its usual steady and even course last year, and about the only development of interest was a gain in crude yellow from 31 to 32c. in February, owing to the light supplies. Refined yellow was generally held at 34@36c. and bull white at 40@45.

CARNAUBA.

The most interesting market developments last year concerned lower grades which have comprised the practical items of market significance. No. 3 wax was upward from 30½ to 37½c. during the opening month, chiefly as a result of a rally in the primary market based on talk of a 60 per cent. yield, owing to excessive rains. In

February the situation claimed, and with a keener selling policy in effect on spot there was a reaction to 36c. The downward movement was uninterrupted on the lack of important demand and better arrivals until early June, when 32½c. was available. By this time the primary market was again in upward tendency and spot prices responded to an advance to 35c. A steady reaction marked the last half of the year, particularly during the closing months, when the usual dullness, incident to the new crop situation, had its effect, the year closing at 32½c.

North Country wax opened on a basis of 30½c. and reached a 37c. basis by early February, subsequently declining to 33c. The primary flurries in June established the market at 35c., and as available supplies of this variety were lower than those of No. 3, the market for North Country continued its upward tendency to 37c. by August, declining to 34c. in November. There was a slight recovery to 34½c. at the close on the lightness of stocks.

The market for the higher grades of wax was more or less nominal last year in the absence of import supplies and fluctuations were not of material significance. Floor wax was higher, from 54c. to 61c.; No. 1 advanced from 50c. to 62c. by March, declining subsequently to 57c.; No. 2, which was in particularly light supply, rose from 41c. to 50c. by February, and reacted to practically its opening quotation by November.

JAPAN WAX.

This market was subjected to comparatively little price change last year, values remaining on a disappointing basis throughout. There was a steady recession in values from 9¼c. to 8½c. in August, principally on the lack of inquiry. By November 8¾c. was generally named, the demand having been stimulated as a result of between 400 and 500 cases having been damaged in transit from the primary market by wood oil. In December came advices of keener speculation in the primary market, from which quarter reports were circulated of a convention of producing interests and an intention to curtail the acreage by half with a view of creating a more favorable market. Spot supplies had by this time become light and holders found no difficulty in maintaining 9c.

The high and low prices by months during the late years follow:—

	1908. H.	1908. L.	1909. H.	1909. L.	1910. H.	1910. L.	1911. H.	1911. L.
Jan.....	11¾	11½	11½	10¾	9¼	9¼	9¼	9¼
Feb.....	12	11	10¾	11	9¼	9	9¼	9¼
March...	11	10¾	10½	10½	9	8¾	9¼	9¼
April....	10¾	10½	10½	10½	8¾	8½	9¼	9
May.....	10½	10	10½	10	8½	8½	9	9
June.....	10½	10¼	10	10	8¾	8½	9	9
July.....	10½	10¼	10	10	9	8¾	9	9
Aug.....	10¾	10¼	10	10	9¼	9	9	8½
Sept.....	11¼	10¼	10	9¾	9¼	9	8½	8½
Oct.....	12	11½	9¾	9½	9¼	9	8½	8½
Nov.....	11¾	11¾	9¼	9	9¼	9¼	8½	8½
Dec.....	11½	11½	9¼	9¼	9¼	9	9	8¾
Year....	13	10	11½	9	9¾	8½	9¼	8½

PARAFFINE.

The market for domestic refined has followed an even course throughout the year, and despite the continued underselling of the foreign product, the market for domestic was generally favorable. Domestic crude wax was also practically unchanged through the year. Toward the close of the year competition between the foreign and domestic refined was rendered less keen by the firmer tendency of the imported product in the countries of origin.

Details of exports of paraffine wax by months for the last three years follows:—

	1909. Pounds.	1910. Pounds.	1911. Pounds.
January	9,150,249	16,777,980	18,676,843
February ...	9,798,355	14,694,187	17,345,879
March	10,700,632	15,210,474	21,563,501
April	12,780,469	11,679,686	16,482,913
May	14,104,698	14,562,796	14,952,862
June	16,189,556	15,473,818	18,636,336
July	.....	16,373,210	12,778,199
August	13,959,708	17,170,155	15,880,771
September ...	16,031,076	15,576,241	20,818,100
October	15,823,482	19,888,978	*9,128,447
November ...	23,909,338	19,251,654	18,302,055
December ...	24,335,233	23,274,918	.....
Totals	181,327,568	199,913,206	213,982,478
Values	$7,608,624	$7,329,143	$7,046,735

The figures showing the distribution by countries for the last three years follow:—

	1909. Pounds.	1910. Pounds.	1911. Pounds.
U. Kingdom..	101,251,267	98,203,415	91,864,175
Germany*	.....	.....	10,878,329
Italy	12,408,039	18,461,541	18,346,993
Spain*	.....	.....	5,433,186
Other Europe..	24,845,017	3 ,623,266	26,472,229
Mexico	12,501,862	10,125,266	13,286,572
Japan	8,000,605	8,718,080	14,678,943
Africa*	.....	.....	12,815,680
Other c'ntries.	22,320,778	32,781,704	26,206,371

* Not separately stated prior to July 1, 1911.

CANDELILLA.

This article, which is still in a more or less experimental stage in its commercial significance, was listed in our regular price column last February at 36c., which quotation was, however, regarded as purely nominal. We have had occasion since to revise it steadily downward to 22c. The prospects for marketing this wax do not seem to be at all promising, judging from the experience local dealers, who advise us that after repeated efforts to have their consuming trade adopt it, it is still regarded as a far from effective substitute for the established varieties of wax in the market.

DOMESTIC CRUDE DRUGS.

Golden Seal.

Nineteen eleven opened with very little, if any, golden seal carried over, and the market soon began to boom until it reached the highest price ever known in history, starting in at $2.25 and winding up at $4.75@5 per lb. That an actual scarcity exists, there is no doubt, and from present indications the market will be much higher before the 1912 crop ever reaches the market. The only thing that will cause a decline is the fact that the article is now being cultivated very extensively both in America and Europe, and this is liable to effect the market within the next two years.

Mandrake Root.

This article was not gathered very extensively, but there was an immense amount carried from 1910, consequently the market has been a drag all season, and there are now many carloads held yet in the West, so that there is not much prospect of an early advance in that article.

Blood Root.

This article has been slow and dragging for the last two years, and with ample stocks in the hands of consumers and dealers, there is not much prospect of an early advance.

Wahoo Bark.

This article went soaring to an unprecedented price, but on account of the moderate weather early in the winter, the high price stimulated peeling, and the market looks much weaker, although there is not much prospect of a very heavy decline in the near future, or at least not until early next spring.

Slippery Elm Bark.

There has been very little elm bark peeled within the last three years, but heavy stocks have been carried in all sections. However, stocks are now very light, and we would not be surprised to see a scarcity before there is a new crop in the market.

Pink Root.

This article has been very dull for the last few years, but there has been very little gathered and we look for an early advance. There is, however, a large amount of imitation root held in certain sections, and consumers are very particular to secure the true article.

Ladyslipper Root.

While the crop of 1911 was not heavy, yet there was considerable carried over, and the article has been slow and dull. The future looks considerably brighter, however, on this article.

Culvers Root.

This article has advanced sharply on account of the exceedingly light crop, but at the price prevailing within the last year or two the diggers will not search for the root, and in consequence we look for a considerable shortage before there can be any new crop gathered.

Prickly Ash Bark.

scarce, on account of the drought early scarce, on account of the drought early in the spring, the peeling season was cut short, and in consequence the crop was very light.

SAN FRANCISCO TAHITI VANILLA.

During the last year the market for Tahiti vanilla beans has advanced steadily from in the neighborhood of 95c. to $1 per pound to the price of $1.75 at this writing, at which it is firm with an upward tendency, provided the arrivals are not excessive; such would be contrary to all expectations. This advance has been due to several causes, mainly:—

The decreased supplies coming forward from Tahiti and the general strength and advance of the world's vanilla market.

The arrivals in San Francisco from Tahiti for the year ending December, 1910, were 4,984 tins, while for the year ending December, 1911, they were 4,718. This, on the face of it, does not look like much of a decrease, but we would call to your attention that during the first four months of 1911, 2,574 tins arrived, while during the second four months, 1,600 tins, and in the last four months, only 544. As the Tahiti crop roughly speaking begins to come in May, you can see that the arrivals during the first four months of 1911 properly belong to the crop of 1910 and that the real crop of 1911 shows a marked decrease.

The indications for the crop beginning to arrive in May, 1912, are that it will not be a particularly small one (normal, say about 5,000 tins), but, nevertheless, it is our opinion that prices will not decline greatly from their present level, unless there should be a great slump in the values of other vanillas, such as Mexican and Bourbon.

We believe that Tahiti vanilla beans, due to the exploitation that has been given them over the United States during the last few years, are in much greater demand and that now they are beginning to take their proper place in the world's market for vanilla, i. e., in our opinion their intrinsic value is from 60 per cent. to 75 per cent. of the price of Bourbon beans, or even more as the cure becomes better.

You understand that during the last year colonial laws were passed in France covering the curing and preparation of vanilla in her colonies, one of which is Tahiti. These laws are at present strictly enforced and have tended to greatly improve the quality of exportations. The beans contain now anywhere from 15 to 30 per cent. less moisture than in the past, which increases their value and vaniline properties correspondingly. Importers here on receipt of shipments from the islands are not forced to rush the same on to the market for fear of the beans spoiling, as they have in the past, and we do not believe that we will see the large fluctuations in price that have prevailed in the past, due to forced sales on large arrivals.

Taken all in all, it is our opinion that Tahitis will hold up to their present values and that the price will increase steadily.

Another factor which enters into the arrivals in San Francisco and effects the market in the United States is that European markets, which have in the past been the largest consumers of Tahiti beans, are enabled, due to the better keeping qualities of the beans, to buy in Tahiti for direct shipment to Europe, thereby cutting out the San Francisco market, which in the past necessarily had to handle the beans, as when they were shipped wet and improperly cured they would not stand the long trip to Europe from Tahiti.

LONDON DRUG MARKET.

The year 1911 was chiefly remarkable for the generally high level of values attained and in the following paragraphs the outstanding events of the year are reviewed. Taking first some of the crude drug staples, which permit of ready comparison, we have the changes reflected in the succeeding table:—

CRUDE DRUGS.

	Open s.	Open d.	Close s.	Close d.
Aloes, good hard bright, cwt.	34	6@—	32	6@—
Buchu, good round green, lb.	2	6@—	3	9@—
Cardamoms, good bold, pallish to pale	2 10@3	1	3	7@3 11
Ipecac, Rio, fair	8	6@—	9	3@—
Cartagena, fair	7	6@—	9	0@—
Opium, good Turkey druggists'	13	9@—	20	0@—
Sarsaparilla, fair gray Jamaica	1	6@—	1	10@—

	High s.	High d.	Low s.	Low d.
Aloes, good hard bright, cwt.	36	6@—	32	6@—
Buchu, good round green, lb.	4	7@—	2	6@—
Cardamoms, good bold pallish to pale	3	7@3 11	2	4@2 11
Ipecac, Rio, fair	9	6@—	7	6@—
Cartagena, fair	9	6@—	7	3@—
Opium, good Turkey druggists'	29	0@—	13	6@—
Sarsaparilla, fair gray Jamaica	1	10@—	1	6@—

In the early months Cape aloes were not in plentiful supply and a rise of 2s. 6d. was made in good hard bright firsts at 26s. 6d.; value then receded until 34s. 6d. was the basis, but in July the small offerings and a good demand stimulated values to 36s. 6d., again followed by a slow retrogression to 32s. 6d. Curacao also declined on balance 55s. for good bright liver, contrasting with 65s. in the first stages, and Socotrine have also cheapened somewhat.

Under the influence of smaller shipments from South Africa buchu advanced in value, although not attaining the level of 7s. 6d. per pound registered in 1910 for good round green. The stirring events of that year had so completely settled down that 1911 opened at 2s. 6d., followed by some recession in branch to 3s. 6d. Supplies, however, continued only to dribble in, and 4s. 6d. was scored in June and in the second half of the year business was mostly on the basis of 4s. 3d. (although in November 4s. 7d. was once paid publicly). Buyers holding off, however, in anticipation of the new crop, the year closed at 3s. 9d., although a surprise at the finish came in an increase by 1s. in the tax imposed on leaves collected on Crown lands, making it 1s. 6d. per lb.

Some very good prices have been obtained for cardamoms, as can be gathered by contrasting the 3s. 7d.@3s. 11d. realized in December for good bold pallish to pale, say with the 1s. 10d. @2s. obtaining in August, 1909, to go no further back for an even lower level. The high and improving range of values in 1911 was sympathetic with the curtailed total shipments from Ceylon, and although the United Kingdom itself in common with several other large consumers received more than in 1910 (being enabled to do so by the much reduced shipments to India), the British receipts were much less than in 1909. The area of cardamons under plantation in Ceylon has in late years shown a material falling off, due it is said, to the better attractions of rubber growing.

Although ipecac did not reach the extreme level of 12s. for Rio, attained in 1910, values in 1911 were distinctly above average. Quotations have in the main accorded with the stock statistics, although at times holders of Cartagena have been more largely responsible for maintaining values, not being, like Rio interests, hampered by cheaply inclined sellers. In the first quarter there was some decline, Rio falling from 8s. 6d. to 7s. 6d., Cartagena from 8s. to 7s. 9d., Minas from 8s. 3d. to 7s. 9d. and Johore more drastically from 8s. 3d. to 6s. 3d. In the second quarter Cartagena was practically stable at 7s. 9d., although the principal interest was in Rio, stocks of which were small and holders tenacious. There were public sales in the third quarter as low as 7s. 10d. for Rio and Cartagena privately got down to 7s. 3d.@7s. 1d. The concluding quarter, however, was the best period, when on the strength of the statistical position both Rio and Cartagena were put on a 9s. 6d. basis in November. A heavy offering of Johore in December was expected to turn the market down, but demand was so good that contrary to expectation this root registered up to 9s. per lb., and it was at this figure also that Rio closed, Cartagena finishing at 9s. The stock figures of Rio and Cartagena privately got down month compared with 1910 have been as follows, in packages:—

	Rio 1911.	Rio 1910.	Cartagena 1911.	Cartagena 1910.
January	46	55	54	61
February	54	45	53	56
March	45	31	42	138
April	39	31	43	250
May	36	26	41	243
June	34	32	38	222
July	34	31	26	197
August	24	53	22	192
September	23	98	20	174
October	60	61	24	166
November	54	44	24	136
December	49	51	23	101

Opium reached a level unprecedented for many years at least. Prices were on a rising scale in the first quarter as a result of damage by frost to the Turkey plants from the fall and early spring sowings. The advance in this period was only about 1s. per lb. on good Turkey druggists' quality. The operating causes continued, however, to manifest themselves, and crop estimates become of minor proportions, so that by June 30 another 3s. 6d. had been added. The seriousness of the situation was then made apparent by calculations in July of this year's crop as low as 2,500 to 3,000 cases, a quite insufficient quantity to go round and which even allowing for unexpected old stocks, made the position one of undeniable strength. Value, accordingly soared, and with the paucity of arrivals most marked at Smyrna and Constantinople September closed with a further increase of 7s. 6d. per lb., and in the last quarter the stringency compelled purchases to be made on a continually hardening basis, so that fully another 2s. 6d. was reflected in closing values, which were more than 100 per cent. dearer than at the opening of the year. The Persian drug offered little relief to the situation, supplies being restricted by adverse climatic and political troubles. Value at the finish, where any was to be obtained, was 28s. per lb.

Sarsaparilla went dearer. Fair gray Jamaica improved by 3d. per lb. in the first six months and in the second half, although there were some fluctuations, another 1d. was added, so that the opening price of 1s. 6d. compared with 1s. 10d. at the close; fair native Jamaica advanced 10½d. to 1s., and fair gray Lima from 10½d. to 1s. 1d., although as high as 1s. 3d. was paid early in December.

Senna has been a fairly even market, the variation on balance being of small significance. An exception, however, was provided in October when bold Tinnevelly realized some surprisingly good prices, up to 9d. being paid under competition.

The Chinese rebellion was expected to influence prices of rhubarb materially upwards, but although full values were obtained anticipations were not altogether realized. Comparison is difficult, but an indication of value reached may be given by the last public sales of bold round high dried Shensi of good pasture (in October) at 2s., of bold flat high dried (in November) at 9¼d., of medium round Canton (also in November) at 1s. 5d.

Wax in the first half showed a small advance, but in the second sales have generally been on the basis of £7 5s. @£7 10s. for fair Jamaica.

Asafetida did not reach the very high prices of 1910, the new U. S. A. regulations tending to broaden the selection and reduce competition. Realizations, however, were none the less on a substantial basis as indicated in the following record of the chief public sales of fair to fine lots:—

	£ s. d.	£ s. d.
January 12—		
Good fair free almondy drop and block ..... cwt.	16 15 0	
Fair do.	13 0 0	@15 15 0
March 23—		
Fine pale drop and block	18 15 0	@20 5 0
Good pale and almondy drop, little pinky	17 0 0	@18 0 0
Pale heavy drop and block...	15 10 0	@16 0 0
July 13—		
Good to fine drop and block, part little soffish pinky massed	18 10 0	@20 5 0
Fair do.	15 0 0	
November 30—		
Good almondy drop and good brownish almond in block with some pinky block.....	16 15 0	@18 0 0
Good soft pinky part brown block with almondy drop..	17 0 0	@17 5 0

Good gum benzoin sold both in January and December at £8 10s., fair commanding £7 5s.@£7 15s., and ordinary £6 7s. 6d.@£6 15s. Siam benzoin has fetched long prices as indicated by the following public sales:

	£ s. d.
January 12—Good small almond, part showery block ..... cwt.	25 15 0
February 23—Medium small and bright loose tears	28 10 0
July 13—Fine bold and extra bold pale tears	38 0 0

The article has been by no means plentiful, and even higher prices have been realized privately. Palembang benzoin in tins sold in the autumn at 67s. 6d.@71s. per cwt. for ordinary barley.

Fine Drugs.

Considering next some of the main changes in the fine drug classification we have the following table based on weekly closing prices:—

	Open.	Close.
	s. d.	s. d.
Bromide potassium, 1 cwt...lb.	1 0½	1 3½
Calomel (less than 2 cwt.)..lb.	2 11½	3 0½
Morphine muriate powder, contracts .....oz.	6 6	13 9
Codeine, pure cryst., 70 or 35 ozs. .....oz.	9 11	19 9
Cocaine hydrochlor., 175 ozs..oz.	9 4	8 9
Quinine sulph., best German.oz.	0 6½	0 7⅛
Santonin, 2 cwt. lots.....lb.	39 3	57 9
Strychnine, B. P. cryst., less than 100 ozs.....oz.	2 3½	2 0½
Sugar of milk.....cwt.	.. ..	90 0

	Highest.	Lowest.
	s. d.	s. d.
Bromide potassium, 1 cwt...lb.	1 3½	1 0½
Calomel (less than 2 cwt.)..lb.	3 0½	2 11½
Morphine muriate powder, contracts .....oz.	13 9	6 4
Codeine, pure cryst., 70 or 35 ozs. .....oz.	19 9	9 11
Cocaine hydrochlor, 175 ozs..oz.	9 4	7 11
Quinine sulph., best German.oz.	0 7¼	0 6¼
Santonin, 2 cwt. lots.....lb.	57 9	39 3
Strychnine, B. P. cryst., less than 100 ozs.....oz.	2 3½	2 0½
Sugar of milk.....cwt.	105 0	.. ..

Morphine and codeine have naturally responded to the advancing course of opium, although their upward movement has to some extent been restrained by the absence of a convention in the former. Nevertheless value of morphine closed more than 100 per cent. dearer than at the beginning, a basis of 13s. 9d. ruling for contracts of hydrochloride powder. Codeine, at 19s. 9d. per oz. for 35-oz. contracts, is just about 100 per cent. dearer so far as the official rates are concerned, but some of the makers in the convention for this article have almost consistently wanted more than the scale. There was a variation in the contract quantities for codeine 70-oz. contract quantities, for instance, becoming 25 ozs.

Cocaine made its first move in July, being an official decline of 1s. 5d. to 7s. 11d. for 175-oz. contracts of hydrochloride. Demand, however, subsequently revived and with makers active feeling was developed that prices were not in proportion to crude and consequently 10d. was added in October, when a big business was done from the works and also from second hands, their prices being 8s. 3d.@8s. 6d.; there has been no further change, although the position is strong.

Demand for quinine has been on the usual extensive scale on the basis of 7½d. for large bulk quantities of "B. and S." and 8½d. for Howards; and, although the year saw no alteration in makers' price the position is really substantially stronger.

Through price developments in the outside market to March 31 second hands adhered to a range of 6½d.@6¾d. for best German marks; April, however, witnessed the lowest at 6¼d. In June bark and alkaloid were doing better in Amsterdam. London quotations developed to 6¾d.@7d. But the most striking development was the entrance in the market of successful speculators in sugar who saw in quinine a favorable investment for spare money; their attention was chiefly turned to Java and Amsterdam makes, the status of which were brought to 7d. and 7⅛d., respectively, while quotation for German became 7¼d. There was some recession towards the close, a basis of 7⅛@7¼d. obtaining for B. and S. from second hands.

Strychnine makers advanced prices in August for the first time in two years, due to the increased cost of raw material. The advance was 1½d. to 3d., as to the preparation, 100-oz. contracts in bulk becoming 2s. ½d. for B. P. cryst., 1s. 10d. for hydrochloride, 1s. 9d. for nitras and 1s. 9½d. for sulphas.

Bromides had but one advance and that of 3d. in February, bringing 1-cwt. lots of potassium to 1s. 3½d., of sodium to 1s. 6½d. and of ammonium to 1s. 8½d. per lb. Pyrogallic acid advanced in two stages by 1s. 1d. on a better understanding between makers, crystals moving to 4s. 3½d.@5s. 11½d. net, delivered as to quantity. Gallic acid advanced to 1s. 7¼d., tannic acid to 2s. in quantity. Salicylic acid in technical quality had a ½d. movement upwards in September, makers' prices becoming 9d.@1s. 4½d., as to quantity, the change reflecting the dearer cost of carbolic acid. To acetosalicylic acid 3d. was added, making ton lots 2s. 3d., and contracts were booked in soda salicylate at 1s. 3½d. for powder and 1s. 5d. for crystals.

Mercurials have been adjusted as occasion has required to the fluctuations in the metal, the net result being an addition of 1d. per lb., subchloride in less than 2-cwt. lots being 3s. ½d. The convention in bismuth salts has had somewhat troublous times, sales of assorted lots below the official scale causing considerable dissension in the camp. An arrangement, however, was made towards the close of the year by which the "re-sale" clause was abolished, as from January 1, 1912; also the assorted quantities columns were reduced to two (1 cwt. and 2 cwt.), as against 4 (28 lbs., 56 lbs., 1 cwt. and 2 cwt.), and the old 56 lbs. price became the new list price for small quantities. Thus subcarbonate on the list price was altered to 8s. 9½d. per lb., while in 1 cwt. assorted quantities it is priced 8s. 7d. and in 2 cwt. assorted at 8s. 4½d.

Sugar of milk considerably advanced in consequence of the severe drought experienced in Europe in the summer, at one time being quoted at £5 5s. per cwt. There was a small recession in December to 90s. on cheaper offers forward (80s. c. i. f.), and there have been statements that the high prices have determined certain interests abroad and at home either to revive disused plant or erect new. Santonin is 18s. 6d. per lb. dearer through a succession of advances by the Turkestan syndicate.

Menthol attained a status not approached before since 1903. The article was under bullish influences more or less throughout the year. There was a flurry in February establishing value for a little time at 5s. 9d. above the opening. Some of this was lost subsequently, and just before the violent movement upwards in the early fall the quotation was 16s. 3d. per lb. Then a number of causes co-operated to produce a state of almost unprecedented stringency. We were in an inter-crop season with a heavy "bear" account in Hamburg and with stocks at the chief European and American centres forded an opportunity to Japanese in at a very low ebb. The position afterests, of which they fully availed themselves. Their agents bought up extensively anything that was available, and when partly from suspicion of this continental bears consistently tried to cover and American demand manifested itself in somewhat large proportions, the Japanese had the position more or less in their hands. Price for spot quickly rose in the third week in October by 8s. 9d. per lb., making the price 25s., and in the fourth week by another 5s.; indeed for a short space of time some operators tried to "talk" 35s. as the value, but this was considered as overdoing it. Since then value has remained round about 27s. 6d. with Suzuki at 25s. The range of the market is shown in the following summary:—

	Open.	Close.	High.	Low.
	s. d.	s. d.	s. d.	s. d.
Mentrol, Kobayashi, lb..11	9	27 6	30 0	11 9

Camphor.

For a large part of the year camphor was quite uninteresting, but in the earlier stages it was pregnant with event. A strong bullish sentiment invested the crude article in January, and the Japan monopoly withdrew their product from the market throughout February and for part of March; meantime the spot scarcity and the strength of primary cables enabled China crude to be lifted from 155s.@180s. per cwt. Then the bulling tactics were settled by the Japan bureau declaring the very modest addition of 2s. 6d. to "B" quality and 5s. to "BB," smallness of the rise being attributed to a desire not to encourage Chinese production. The article has attracted little attention since.

Refined grades moved up when crude advanced, but the Japanese makes finished only a trifle better than at close. English bells had advanced 3d. by February, but lost 1d. of it in May. German bells advanced in the early months and the quotation at the finish for 5-cwt. lots is 1s. 9d. per lb.

The fluctuations in camphor is shown in the following:—

	Open.	Close.
	s. d.	s. d.
Japan crude "B," c. i. f...cwt.	140 0	142 6
do., "BB" do.....	145 0	150 0
China crude, spot.....	152 6	155 0
Japan refined, spot, 1-oz. tablets, lb.	1 7	1 7½
do., 2½-lb. slabs.....	1 6	1 6½
English bells, over 1 cwt.....	1 9	1 11

	Highest.	Lowest.
	s. d.	s. d.
Japan crude "B," c. i. f...cwt.	142 6	140 0
do., "BB," do.....	150 0	145 0
China crude, spot.....	185 0	150 0
Japan refined, spot, 1-oz. tablets, lb.	1 10	1 7
do., 2½-lb. slabs.....	1 9	1 6
English bells, over 1 cwt.....	2 0	1 9

Miscellaneous.

In this section it is only necessary to mention cod liver oil, which opening in in the new season at 115s., advanced to 197s. on some quotations in March and then receded to as low as 104s. in December.

LONDON VANILLA MARKET.

Stringent conditions ruled throughout 1911, the upward course of values reflecting the short supply, conditions which were a feature of the year. True, that at the first auction in January a larger quantity was put up—1,348 tins—than had been offered at a public event for two years, but at the subsequent sales the catalogues were quite small, excepting November, and there were long intervals when the meagerness of supplies caused scheduled auctions to be passed over. These circumstances are brought out in the following comparative table of the goods offered and sold from the rostrum in the last three years:—

	—1911—		—1910—		—1909—	
	Offered. Tons.	Sold. Tons.	Offered. Tons.	Sold. Tons.	Offered. Tons.	Sold. Tons.
Jan...	1,348	839	277	232	482	441
Feb...	*..	..	79	40	272	240
Mar...	94	83	*..	..	437	338
Apr...	*..	..	158	133	*..	..
May...	81	48	188	172	374	322
June..	83	83	122	105	*..	..
July..	*..	..	51	45	263	238
Aug...	*..	..	200	200	100	81
Sept..	39	35	*..	..	108	105
Oct.1..	*..	..	160	146		
Oct.29.	141	138	334	164	150	150
Nov...	693	558	564	412	499	491
Dec...	*..	..	20	20	*..	..
Totals.	2,479	1,784	2,153	1,669	2,695	2,451

*No sale.

Analyzing the catalogues we find that Seychelles again predominated, Madagascar coming a bad second, the quantity of Bourbons and Mexicans being insignificant. This is shown in the following table:—

	—1911—		—1910—		—1909—	
	Off'd. Tons.	Sold. Tons.	Off'd. Tons.	Sold. Tons.	Off'd. Tons.	Sold. Tons.
Seychelles..	1,929	1,379	1,238	1,095	1,777	1,573
Mauritius..	122	122	141	128	292	378
Java.....	18	18	77	60	199	199
Ceylon....	66	66	100	89	89	82
Madagascar	259	137	381	239	54	54
Australian.	..	..	..	..	43	43
Bourbons...	11	2	151	135	42	36
Zanzibar...	..	..	..	..	36	36
Fiji.....	..	..	5	5	32	32
East India.	1	1	..	..	16	14
Tahiti.....	..	..	1	1	9	1
West India.	2	2	7	7	2	2
Mexican....	16	2	..	..	1	1
Tahiti of Mexican growth...	55	55	..	..	..	..

At the first auction demand was fairly brisk, good long beans being steady and short to medium steady to 6d. dearer. At the second event the ready response to the small lots offered established an advance of 1s. on good fine long and medium and 2s. on shorts.

The strengthening course was improved on at subsequent events, the only exception being occasionally easier prices for short beans registered at the concluding sales. A basis of comparison is provided as far as variations in size and quality will permit by contrasting realizations on Seychelles at the first auction with those at the final sale:—

SEYCHELLES, JANUARY 25.

	s. d.	s. d.
Fair to good, 7½@8½ inches.....lb.	17	0@17 6
6½@8 inches	13	6@16 6
6 @7½ inches	11	6@16 0
3½@7 inches	10	6@15 6
Splits, good, 5@7½ inches.....	11	6@—
3@4 inches.....	11	0@—
Common, 3@8½ inches.....	9	6@13 6

SEYCHELLES, NOVEMBER 29.

	s. d.	s. d.
Fair to good, 6½@8½ inches.....lb.	18	0@19 0
3@6 inches.....	14	0@15 6
Common, 3@7 inches.....	13	6@14 0

The highest price paid publicly during the year, however, was scored by Madagascar when at the November auction good 7@8-inch beans was bid for and knocked down at 19s. 6d.

It will readily be understood that the auctions this year have been of less significance than usual and the private market has figured with more importance. The course of events here brought continually advancing prices until September, after which a shade easier rates were accepted. Thus the average price of a Seychelles bean in January was 13s.; under the influence of the short supplies the value in August-September was 18s., but as the arrivals of new crops came in the price receded to 16s. 6d. towards the end of December. It was anticipated that the rise in value would be greater than it actually was, but the unusually early advent of new crops, Mayottes and Comoros Islands beans, somewhat relieved the situation. These were quickly taken into consumption so that the major proportion cannot be included in calculations as to probable supplies, and, moreover, about 25 per cent. of the new crops generally was engaged in advance of availability.

LONDON ESSENTIAL OIL MARKET.

The Sicilian essences enjoyed a very fair degree of expansion during 1911, bergamot showing the greater improvement. Evidences of restricted pressing and other suggestions of smaller outturn in lemon and bergamot influenced higher quotations, lemon which had been selling round about 3s. 3d. c. i. f. in January improving in February to 4s. 8d. There was little easing off in March, but a good demand in the second quarter lifted value to 5s. 6d. c. i. f. with occasional small setbacks. American buying on the Sicilian market and rumors of a reduced crop of fruit in the new season brought old oil quotations to 6s. 6d. in August and 7s. or even more in September, and 5s. 6d. c. i. f. for new pressings, December-January shipment. The position seemed to be somewhat artificial, and the speculative element in new rates induced hesitation in buyers. Assisted by this and also by primary difficulties in shipping lemon fruits an easier tone was developed and new crops to come forward declined to 4s. 9d.@5s. c. i. f. and old to 5s. 9d.@6s. in October-November. In December chief interest was in the new crop at 4s. 9d.@5s. 3d. c. i. f. Bergamot in the early days of the year had fallen to 15s. c. i. f.; the retardation of pressing and a backward condition in the growing fruit put values in the ascendant, so that 16s. 6d. was quoted in February, advancing in April to 19s. 2d. c. i. f. and continuing to improve until in June 21s. was named. Remaining firm in July, August figures ranged up to 22s. c. i. f. for old crop and 19s. for new. Strong advices indicating a short bergamot outturn in 1912 improved quotations further, but London was held back somewhat by second hand supplies, so that 20s. 6d. was the figure at the close, as against 22s. 6d. c. i. f. in Reggio. The highest price probably paid for good oil in quantity was 23s. net. Orange oil improved in sympathy with the better status of the otto essences, but more particularly from the settlement of the tariff question in America, so that 6s. c. i. f. at the beginning compares with 8s. 6d. c. i. f. for new crop at the finish. Spot quotations for best grades of oils, as given from leading quarters week by week have shown the following variation:—

	Open.	Close.	High.	Low.
	s. d.	s. d.	s. d.	s. d.
Lemon .....lb.	3 6	5 10	6 9	3 6
Bergamot .....lb.	16 3	23 0	23 0	16 3
Orange	6 2	8 4	8 4	6 2

Otto or rose furnished a full measure of interest. Good brands of Bulgarian distillation were selling in January at 33s. per Turkish ounce, but at the height of the new crop season 48s.@60s. per English ounce was the range for reputable marks, the inside figure being for stuff purchased on analytical certificate, while for oil guaranteed "own" distillation 52s. 7d.@60s. per English ounce was named. There has been very little departure since from these quotations, the only difference at the close being that the lower figure is 45s. There was the usual controversy as to the genuineness of estimates of the new crop outturn, but in the end the view seemed to be accepted that the crop was short. Actual figures received in London from five separate distillers showed:—

	1911.	1910.
I .....kilos.	1,864	2,226
II	2,400	....
III	2,601	3,125
IV	2,569	3,125
V	2,581	2,560

The Chamber of Commerce at Plovdiv issued a return showing the 1911 output as 2,485.5 kilos. The high prices for the natural otto have stimulated the demand for synthetic roses, which in some cases show a remarkable improvement in quality.

In the following table are indicated the chief changes in several other items of outstanding importance in the essential oil classification:—

	Open.	Close.	High.	Low.
	s. d.	s. d.	s. d.	s. d.
Star anise....lb.	5 0	5 8	6 0	4 9
Cassia	3 8	3 10	4 3	3 4½
Citronella	0 11½	1 0½	1 1	0 11½
Lemongrass	0 3¾	0 5	0 5	0 3¾
Peppermint—				
H. G. H.....13	0	15 6	15 6	12 10½
Wayne county.10	0	12 6	13 3	10 0
Japan	6 4	7 9	8 0	6 4

In star anise the feature was the heavy demand in the autumn, which, on a much depleted market, caused prices to soar to 6s., but there was a little easing off towards the close. Cassia figured prominently on two occasions, once in February when 4s. 3d. was paid, followed by a gradual recession to 3s. 4½d. at the end of July. In October-November c. i. f. prices went in the ascendant and spot responded to 4s.@4s. 3d., but a 3s. 10d. level obtained at the finish.

Citronella has been chiefly interesting by the strong efforts made by certain English chemists to secure the marketing of the oil on the basis of geraniol content; the idea has not altogether received the support of German chemists, but the co-operation of some leading Ceylon exporters has been secured and it has been reported that contracts have been actually booked on this new system. The old method is alleged to admit oil heavily adulterated with petroleum. Lemongrass prices rose on certain buyers, who had for long given out that they were well covered, being compelled to come into the market, and 5d. per oz. spot has been the established figure for two months; arrival prices have been between 3¾@4¾ net c. i. f., but at one time as high as 5¼ net c. i. f. was said to have been paid. As regards American peppermint oil values advanced early in the year on the strong character of American advices, the demand eating considerably into the hold-over stocks, so that later the effect of a fair yield from the new crop was discounted.

Some oils of English distillation have had an interesting career, notably cloves, which have dovetailed in value to the cost of the fruit. In January price was 4s. 4d. for quantity, but with occasional recessions value advanced until in September it was 4s. 10d., since when value fell away to 3s. 8d. English lavender oil advanced in August by 10s. or 12s. to 50s. per lb., the growers regarding it as more profitable to "bunch" the flowers for the market than to have them distilled. French lavender remained steady at about 11s. per lb. in the early part of the year, but in the summer there was some reduction to 10s. 3d., followed by an advance to 13s. 9d., since when even higher prices have been reported from Grasse, up to 16s., but 14s. 6d. net naked was the spot price at the close at the place of production. English peppermint oil advanced for new crop to 33s. per lb.

Eucaplytus oil had a rise in the autumn on a short spot stock through some diversion of supplies in Australia for metal separation purposes; up to 1s. 4d. per lb. was paid in London for B. P. oil. Geranium oils experienced the long expected advance, although accompanied by some manipulation of the Bourbon market. Values smartly advanced from 13s. to 18s. 6d. for Bourbon, while Algerian from first hands was quoted at the close at the parity of 19s. 6d. Palmarosa prices have varied from 1½d. to 8½d. per oz., closing sellers at 7¾d.

Linaloe oil declined in October from 8s. 3d. to about 7s. 6d. Bois de rose femelle fell away to 7s. 6d. for large quantities. Neroli oil dropped appreci-

albly. Juniper berry oil advanced on a bad Continental crop from 2s. 5d.@2s. 9d. early in the year to 3s. 6d. in the summer.

ENGLISH GLYCERINE MARKET.

The course of the glycerine market in all descriptions was downward, although the C. P. article for home consumption strenuously resisted adverse conditions in other grades and only yielded at the eleventh hour with the one reduction of the year, viz, £10 per ton. In the first of the twelve months the easier tendency of crude provided a basis for arguing that the British convention's schedule for chemically pure was marked out for a decline, but it was contended that the position of crude was more apparent than real, because endeavors to place substantial orders on the Continent were met by a rise in the official price. Further, it was said, English refiners were largely sold out in all qualities and would have to cover themselves for crude in order to meet spot requirements and contract obligations. Crude of 80 per cent about about the end of January was quoted at £62 to £64 per ton. Dynamite business was being done at £104 10s. per ton net f. o. b. or f. o. r., comparing then with C. P. at £105, less 2½ per cent. free delivered for 5-ton lots in drums. Seeing that average cost of delivery was 30s. per ton, dynamite description seemed at this stage a more profitable product than C. P. Thus the doubt cast on the true position of the crude market, the apparently better attractions of dynamite for the refiner and the relative scarcity of C. P. all pointed to the improbability of this description falling immediately or soon. In February any cheap parcels of crude were readily taken, and with their elimination, price in the north advanced to £70 at one period. An increased demand for dynamite kind also manifested itself about this time. Some of the refiners then announced that they were not sellers for about a month, a circumstance which still further sheltered C. P. There was a reduction in the French refined schedule for C. P. in February, but it did not pay to import them from merchants. Demand was very fair all round in March and April. Crude was easier in May in consequence of the weakness of needy French holders, and English quotation for good 80 per cent. got down to £65 @ £66. There was a good demand towards the end of the month, mainly calling off contracts. In July the course of crude was still downwards at £60 to £62, and the decline continued through the summer months into the fall and in October there were ready sellers at £56 to £57 net. Parisian declines in both crude and dynamite were recorded in October, being influenced by cheap American offers on the European markets—which were a feature in the developments at this time. Dynamite had got down to £88 for 1,260-62 in August and in November to £76 and this, in conjunction with the recession of 80 per cent. English crude to £50, was regarded as certain evidence of an impending reduction in C. P. The autumn demand for the latter, however, was sufficiently good to enable prices to be maintained, especially with some recovery in crude to £54@£55 before the close of November. However, the inevitable had to be faced and on December 18 the British convention in C. P. ushered in a decline of £10 per ton, making the price of 5-ton lots and upwards in 10-cwt. drums for the home trade £95 per ton and in 56-lb. tins in cases £99 less 2½ per cent., delivered. Export prices of C. P. 1,260 closed about £92@£95 f. o. b. for ton lots, less 2½ per cent., according to makes, being about £10 or £12 less than at the beginning of the year.

Dynamite finished at from about £68 @£70 for 50-ton lots f. o. b.

LEIPZIG DRUG MARKET.

A very lively business has been the general feature of the market of botanical drugs since the beginning of the new crop which scarcely had been checked by the quiet period which usually sets in towards the close of the year. With few exceptions only, the crop of the last year is proving not to be sufficient for the demand of choice and first grade qualities, and stocks are nearly cleared or may be before long. These circumstances and natural consequences of the extraordinary weather which prevailed during the growing period of the past year should be taken into consideration by buyers.

Flowers.

ARNICA.

The result of the last crop has been very unsatisfactory and will hardly be sufficient to cover the current requirements. The interest in this article seems, however, to have slackened in some countries, whereas the demand for arnica herb and root continued eager also the past year.

GERMAN AND ROMAN CHAMOMILES.

Stocks are very light everywhere and will probably be consumed entirely on the approach of the new crop. Nevertheless extremely high prices will, in our opinion, hardly be the rule, unless very unfavorable weather should interfere during the new crop.

CALENDULA.

The flowering generally does not take place before July-August, and has been impaired by the long drought prevailing just those months to such an extent that the crop yielded only a very limited quantity. As this drug cannot, however, be missed for some preparations, the high demands of the cultivators had to be agreed to, and it is now almost impossible to obtain any larger quantities even at the high figures ruling, as far as the recent crop is concerned. Some small lots remaining from the preceding crop will likewise be cleared ere long.

CLOVER.

No extraordinary demand for this article has been noted as yet, on the other hand, only very limited quantities have been gathered.

ELDER.

The market has undergone no notable change these last months. The high prices in force are to be regarded as justified, and the depleted stocks will no doubt heavily influence the prices of the new crop.

ROSES.

Supplies are becoming very scarce in all descriptions. The prices paid especially for the "pale" flowers have been so low these years that the gatherers could hardly earn their living wages.

Leaves.

BELLADONNA.

As expected, this drug has been harvested in rather considerable quantities in consequence of the favorable conditions for the drying.

CENTAURY HERB.

The crop of the African qualities has been somewhat insufficient, but relatively large quantities have been marketed, on the other hand, from Central Europe.

DIGITALIS.

This drug has been gathered in sufficient quantities during the later parts of the season, but the leaves are not so well developed as in former years.

HENBANE.

The last crop was satisfactory and prices underwent no material change. Superior grades, which had been scarce since a long time, were likewise offered in sufficient quantities.

STRAMONIUM.

The amount harvested does not answer the expectations entertained on the reports of the favorable weather during the gathering. The demand for this item continued very active since the beginning of the new crop.

WORMWOOD.

No material change is to be stated with respcet to supplies and prices.

Roots.

ALTHEA.

The crop of the German districts cannot be denoted satisfactory, yet the result does not seem to be so small as was feared at first. The same may be said of the qualities originating from other countries. A notable advance of prices on all markets took place, since a rather lively demand for the cut root has set in.

ANGELICA.

The crop of the Thuringian province, as well as of most of the other cultivated roots, has been very small, and the high prices asked by the peasants must be considered as justified, as they do not even leave them a moderate profit in comparison to normal figures in normal years. The stocks will soon be cleared, and the Saxon twisted root which had been neglected for some time, will come in favor again, the more so, as the price is moderate.

BELLADONNA.

This item is dull, in spite of the low prices for which it can be had. As this article had not yielded sufficient profit last year to the gatherers who partly sustained heavy losses, the gathering has been considerably restricted. The present situation would seem to favor purchases.

BURDOCK.

The market has shared the fate of the other cultivated roots. Of the preferred unsplit root only a very small quantity has been dug, and nothing more is available at the time.

CALAMUS.

A tangible decline of the production is to be stated, chiefly due to the low prices that had been paid these years. Since the principal producing quarters are rather distant from the chief exporting ports, the high expenses for freight play an important part besides.

DANDELION.

Supplies were considered to be wanting entirely at the beginning of the season, but the rain-falls setting in late in summer and the unusually fine weather in autumn have produced at last a small increase of production. It is, however, almost sure that the requirements will not be covered by it till the digging of next autumn. Considerable quantities both of the German and the Russian quality have been sold.

GENTIAN.

It becomes evident that the crop was very limited, if not quite insufficient, for at present it is extremely difficult to get lots of importance, which may be particularly attributed to the low wages paid to the gatherers who naturally turn to more profitable occupations. It is, however, not impossible that some parcels are still lying in the High Alps and will be brought down in spring as soon as the roads become practicable, but a decline of the price during this season is hardly to be expected.

HELLEBORE WHITE.

The same unfavorable conditions as stated before have, even to a larger extent, affected the gathering of this article. The quantity available at the time is very insignificant, and the prices which have been paid by the holders exceeded by far the level which may reasonably be considered for the export trade.

LOVAGE AND VALERIAN.

Prices are likewise kept very high under the influence of the unfavorable conditions for all the cultivated roots. German valerian root is scarcely obtainable.

Seeds.

ANISE.

The Russian quality has suffered by very bad weather which set in just before the harvesting time. Also with respect to the quantitative result the crop cannot be denoted satisfactory, so that the Levant and Spanish qualities offered, on the other hand, at moderate prices, met with a ready sale.

COLCHICUM.

There was little demand these last months, and for this reason kept its normal price, but in consequence of the very limited crop, a sharp advance will undoubtedly take place, if larger purchases should be made.

CORIANDER-GERMAN.

Some cultivating districts had a relatively good crop, and fine qualities are available at comparatively low prices.

FENNEL.

The unfavorable conditions of the last summer have been the cause of many disappointments, especially for the German cultivators of this article. The plants which, in the best case, thrive barely under the influence of the protracted heat, partially failed to put forth seeds in consequence. The crop of the bold Saxon quality was a total failure; the high prices asked by the growers were nevertheless paid by the regular customers of this description. For industrial purposes the foreign qualities, which had suffered less, were offered in sufficient quantities and at normal prices. The Saxon quality is now nearly cleared and the few lots still existing are not of first grade.

Miscellaneous.

ERGOT.

Everyone engaged in the drug trade knows the peculiar part this article is playing. Prices steadily advanced until the beginning of the winter and the extremely high prices asked by the collectors had to be paid in consequence of the very small supplies. In case more important quantities should not come from Russia toward spring, and larger requirements should yet to be covered, prices will no doubt advance again so as to attain the level they kept several weeks ago. The supplying districts in Germany are rather limited this season, and the gathering of the ergot is so tedious a work that only the high value induces to undertake the labor. At normal prices the gatherers would lose by it and suspend the collecting in consequence.

TURKISH OPIUM MARKET.

The opium campaign of the year 1911 was one of the most interesting on record. The growing crop progressed very favorably up to January, then a severe cold set in, which continued without interruption up to the end of March and caused great havoc to the autumn sowings, preventing in the same time those of winter from being effected. When the spring came the last sowings of the year were conducted on a large scale in the hope of recuperating the losses sustained by the unfavorable weather. For a while they went on very well, but in May complaints of drought began to be heard, and as the season advanced these increased, until it was thought in June that the crop would only attain 5,000. The market began to stiffen, as these features developed, but early in July it became manifest that we would only have 4,000 cases, which discovery caused a brisk speculative movement, and it was ultimately ascertained that the yield would fall short of 3,000, and as a matter of fact it now shows about 2,800.

America was very slow to realize the state of affairs, falling into the trap set up by speculative firms in the Levant, who falsely denied the smallness of the crop, in order to keep consumers out of the market and buy in the interval all they could for their own account for resell, as they did afterwards with immense profits.

Prices for best manufacturing opium are at this writing firm at 29⅜d.@30s. 6d. per lb., but holders are under the impression that prices will advance much more, considering that the prospects for the 1912 crop are so far very unfavorable. Indeed the fall sowings were this year retarded by prevailing drought beyond the extreme limits of time assigned for them, and the poppies, now weak and small, are perishing wholesale all over the land by the effects of that same frost which is hindering again this year the winter sowings.

Stock at this writing, January 17, 1912, are in Smyrna, 600 cases; Constantinople, 400 cases; interior, 200 cases; a total visible supply of 1,200 cases.

This is all that remains in Turkey to supply the demand from January to July, both inclusive, and we leave your readers to draw their own conclusions therefrom.

CONSTANTINOPLE OPIUM, OTTO OF ROSE AND TRAGACANTH MARKETS.

OPIUM.—The entire last crop did not exceed 2,500 cases, soft shipping kinds included. Notwithstanding very reduced stocks in Smyrna, Salonica and Constantinople, prices were relatively very low during the beginning of November, owing to the crisis created by the declaration of Italian war, but soon later values were promptly increased and early in January good Karahissar opium is quoted at about 29s. c. i. f. Stocks being very short and next crop not being expected before August, it is believed here in interested quarters that prices have not yet reached their highest level.

OTTO OF ROSES.—The real cost of genuine pure otto of roses of this last crop is so high that consumers are particularly warned from so-called "cheap" offers of pure otto. There is practically nothing left of good otto in first hands in our producing districts, and while it is still too early to express any opinion about the coming crop, we believe that the new otto will find ready buyers, as the general demand could not be entirely satisfied by this year's output. It may therefore happen that even a good crop will perhaps not much alter present quotations, the consumption of genuine pure otto having meanwhile increased everywhere.

TRAGACANTH.—Last year prices had been pushed to the maximum of value known since long years for Turkish tragacanth by the effect of a relatively small crop and the exceedingly keen competition of buyers in the Turkish markets. However, neither the European nor the American markets were willing to reply to these extravagances of Turkish dealers and exports of Turkish tragacanth were not very important, and while stocks were not very heavy and did not practically accumulate, it was quite plain that at same prices no serious development of exports in Turkish tragacanth could be expected. Through the effects of cholera, of the political conflicts in Arabia and Albania and the railroad and roadbuilding in the interior, which absorbed a good deal of the existing labor forces, the new crop too has not resulted a good one and the yield is somewhat below normal average. However, owing to the reserve of foreign consumers and the general financial and political crisis through which our country had to get since the declaration of the Italian war, prices have been considerably reduced and we think that the level reached at present is entirely in favor of consumers, so that brisk sales are to be expected, which might again change the direction of price-movement.

CONSTANTINOPLE OPIUM MARKET.

During March prices rose steadily, the highest point touched being 18s. 6d. for good druggists', and 21s. 6d. for rich soft. This level was maintained for some time, when there was a slight decline, as a result of good rains which fell throughout May and early June.

Notwithstanding the prospects of the crop, which looked much brighter than was the case during March, holders of old crop were firm and showed no signs of giving way.

During March and April the chances were very much against a yield of over 3,000@3,500 cases, as sowings were late and plants very weak, but as a result of the favorable weather during May and early June, a yield of over 4,500@5,000 cases was then probable.

The crop yielded very much less than was expected of it during the month of June and barely a crop of 3,000 cases was gathered in. This was due to unfavorable weather during the gathering season.

The percentage of morphine was also inferior to last year's by about 10 per cent. The crop, therefore, from this point of view, was only about one-fifth of that of last year's.

After touching about 25s. in September, druggists' qualities subsequently declined to 23s. This was merely a passing phase, however, and prices have risen steadily ever since.

During November 27s. 6d.@28s. was paid for druggists', and close on 30s. was asked for similar quality at the close of the year, when it looked as though that level will be maintained for some little time to come.

The prospects for new crop drug-

gists' are by no means brilliant, as owing to the dry weather no sowings have been made in any of the druggists' districts.

Sowings made during January yield quite as well as those effected in autumn, and if we have a fine spell of weather during that month, large quantities of seed will be sown.

The news from soft districts is more encouraging, and it is probable that an average amount of seed has been put underground and is doing well for the time being.

Salonica districts were favored with good rains in September and October, and sowings were affected on a large scale. The plants are doing well and should nothing unforeseen occur a record yield is possible.

It is well over 35 years since price of opium last touched 30s. The advance, on the present occasion, was most unexpected and must be attributed entirely to the heavy demand from the Far East and the unprecedented considerable quantities bought by the Imperial Formosan Government Monopoly during 1910.

SMYRNA OPIUM MARKET.

The year 1911 opened with a fair inquiry for opium from all consuming centres, but principally for the American markets, and the total amount of the drug which changed hands during January amounted to about 35,784 pounds of all grades. Prices at the commencement of the month were 12s. @13s. per lb., but stiffened toward the end, owing to the large demand and to the fact that hard frost having set in, many complaints came down from growers reporting damages to the poppy.

The value of the drug was naturally pushed up and at 13s@14s. during the early part of February a good deal of opium was sold for export and for account of local and interior speculators, and on further reported damages by frost, prices toward the end of the month jumped to 15s.@16s. The sales during February amounted to 47,070 pounds, mostly all for consumers, but during March, out of 65,520 pounds which changed hands, 19,152 pounds were secured on speculation by local dealers.

During April Americans came forward and bought 16,800 pounds of rich old extra Carahissar, but had to pay fully 16s. 3d. for this, and before the month closed small purchases for export and speculation brought up our prices from 15s. 5d. to 17s., as to quality.

May found again the Americans operating on our market, paying 15s. 6d.@16s. 3d. for selected Carahissar, as to quality, and up to 17s. for extra selected rich Carahissar and Yerli.

During this month the United States secured 53,098 pounds and local speculators 3,024 pounds.

In the latter part of June, in which month some 50,000 pounds of opium were sold, a material advance in prices took place, for the last sales were effected at 20s.@21s., as to quality. Confirmation of a very small outtrun and depleting stocks, brought on this advance and by the end of July, in which month 45,360 pounds changed hands, our market was 25s. for old extra selected Carahissar and Yerli, and 22s.@24s. for new crop and poorer grades of old.

August proved a quiet month and consequently a slight decline in prices set in, but September was active, bringing up the total sales for the two months, August and September, to 65,016 pounds.

Prices again advanced during October, during which month we had no rain to speak of and thus growers could not make any headway with the fall sowings. The drought continuing during the greater part of November brought on a further advance and before the middle of December prices reached the almost unprecedented figures of 28s.@33s., as to crop, quality and buying conditions.

The sales since the end of September to date amount to 116,256 pounds, out of which two-fifths were for England and the Continent and the balance for America and Japan.

The total opium sold during the year amounted to 249,000 pounds, against 648,000 pounds for the calendar year of 1910.

The arrivals from the growing districts to Smyrna during 1911 amounted to 234,192 pounds, against 723,576 pounds in 1910.

SALONICA OPIUM MARKET.

Like all the opium growing districts of Asia Minor, our Salonica crop was also a small one, producing only about 380 cases during 1911. In consequence, prices steadily advanced from the very first, and beginning at 22s. they gradually worked up to their present level of 30s. per lb. for opium yielding 12 per cent. morphine. Not only was the quantity deficient this season, but the morphine percentage was also poor as compared with that of 1910.

The existing stock of Salonica opium is insignificant at this writing, being only some 30 cases all told.

The sowing of the new crop was done under good conditions, and up to now the plants have progressed well owing to continued favorable weather.

AMSTERDAM ESSENTIAL OILS.

A retrospect of the business year 1911 must devote a special paragraph to the surprises which the extraordinary weather conditions created in the whole world, and to the high prices of all articles dependent on the products of the soil as raw materials. It could hardly be said that the surprises have always been of a pleasant nature, and the high prices have only been partly synonymous with high profits. The year 1911 has been a year of surprises, of uncertainties, and of excessive prices. These uncertainties are not yet entirely removed, and one must look to the future for an adjustment. It would, therefore, be well not to gauge too high the expectation for the new year, although the outlook is in no way unfavorable.

In Holland the new tariff proposals have created a great deal of resentment, but similar legislation is bound to meet with opposition in every country. Here, as everywhere, people confine themselves to fighting the bill, which is certainly open to amendments, without, however, making any counter-suggestions for the improvement of the financial position. If the bill should become law, there is no doubt that an industrial growth will take place in Holland.

Our industry, especially the distillation of caraway oil, has to reckon with the fact that the special tariff facilities now granted in Germany have induced some manufacturers to resume the distillation of caraway oil. Anybody being acquainted with the cheap offers of caraway oil, which where current in Holland during August of last year, will ask with surprise, how German manufacturers can possibly make a profit out of this business, considering the advantages which the Dutch manufacturer enjoys, such as economy in freight on the raw material and its by-products, more favorable conditions in the purchase of seed, etc. Besides this calculable advantage, the temporary distilling by outsiders immediately after the crop, which obliges them to buy during the principal months of delivery, simply plays into the hands of the speculators. Far be it from us to attribute to them the fluctuations of prices during last year (these purchases having been too small, but they have contributed to the producers obtaining in September and in the first part of October prices beyond all reason.

The sandalwood oil trade during last year does not give rise to any special comment. The prices realized were only little short of expectation. We have already on a previous occasion pointed out that the Mysore Government has very peculiar ideas. We now read the following in the special report of the government for 1910 on sandal wood:—

The Sagar wood is discredited on the ground that its oil-yielding capacity is small, but it is doubtful whether there is any justification for this belief. It seems probable that the difficulties of transport is to some exent responsible for its disfavor. It is, therefore, intended to try the experiment of selling the wood of the sagar and sorab taluks in Shimoga and to see what effect such sale will have on the prices.

This means neither more nor less that the inferior wood from Sagar will be substituted for the better wood of Shimoga, and this is not specially and duly announced. The buyer will notice this year to his detriment that his calculations for Shimoga wood will show a loss instead of a moderate profit. Such commercial policy on the part of the government is an ingenuousness, against which a protest by all interested parties will be justified. But it is also foolish, because it undermines the confidence which Mr. Pigot, the previous conservator of forests in Mysore, had established by great perseverance and intelligence.

SANDALWOOD OIL.—Prices for oil during last year have been normal, but we have no doubt that the stoppage of imports of other kinds of wood than East Indian, yielding an equally good oil if not richer in santolol, has been an unpleasant surprise to many contractors. This accounts for the suddenly advanced prices which have been paid at the last auctions. Nobody, not even the government, has been prepared for such an advance, for example in Jugpokal from 38s. to 40s. in 1910, to 48s. to 51s. 6d. in 1911. Without doubt, the consumption of sandalwood oil has greatly increased, and it is to be hoped that the plantations in German East Africa will prove a success and that the Dutch Government will devote more attention to this profit yielding cultivation.

We devote special attention to the clove oil trade, having exceptional advantages in the importation of the raw material, and in the disposal of the by-product.

Our cultivation of dillseed gave splendid results last year, whereas trials in fennel and aniseed will only be started this year.

Our hyacinth concrete 1911 met with great approval on the part of wholesale perfumers; we shall, therefore, manufacture same on an increased scale.

We beg to refer to the following details:—

CARAWAY OIL.—A survey of our statistics and a comparison of prices for prompt and forward delivery prove that business in this oil during 1911 has been of quite an exceptional nature. Exceptional not only on account of the enormously increased sowing and the subsequent large crop, estimated at a total of 250,000,300,000 bags, but also because such crop followed two abnormally heavy ones, an experience hardly ever witnessed before. This extraordinary state of things is further enhanced by the fact that the farmers have been successful in keeping up prices by sitting on their stocks of seed. The drought during the past summer has certainly done some harm to the young seedlings, but of what consequence can it be, if the 1912 crop is one-third short of the average, seeing that the actual stocks of seed are sufficient to cover the world's requirements over the next two years!

Estimating the 1911 crop as 250,000 bags, adding the 1910 crop as 179,812, and the 1909 crops as 171,740 bags, this gives a total of 601,552 bags.

During these three years (from July, 1909, to July, 1912,) the total needs all over the world amount to 360,000 bags—120,000 per annum—so that in the beginning of the 1912 crop 240,000 bags are left on hand. Under these circumstances it requires more than ordinary pluck to try to maintain prices. Considering, however, that dealers have already contracted at 16½@17 florins for the new crop seed, it is evident that no efforts will be spared to achieve this object. From a financial point of view this is not only possible but very probable, because our peasants can now afford to be even more independent than they were last year, they having reaped huge profits from vegetables, fruits, etc., during the drought; contrary to the German sugar-beet crop, the Dutch crop was larger than ever before.

The yield of oil, on the other hand, has been poorer than in any previous year, only very few lots giving over 4.3 per cent. with a normal specific gravity, so that for distilling purposes practically old seed only is being used.

CLOVE OIL.—High prices did not admit of a brisk business last year. The demand was, however, stimulated as soon as prospects of a good crop were in sight, and many contracts for 1912 have been made. The arrivals of cloves in Zanzibar from July to December, 1911, were 122,700 matts, as against 14,550 in 1910, 48,669 in 1909, 64,600 in 1908 and 145,700 in 1907. While the crop is certain to be good, it is doubtful whether a further decline in price will take place (to-day's quotation for spot being 28½ cents as compared with 40½ cents towards the end of 1910), because speculators are showing a fresh interest in the article. The clove market is at present firm with a rising tendency. Amboyna clove oil.—This exceptionally fine quality is gaining rapidly in favor. The price remains unaltered, the market of Amboyna cloves having remained stationary during the whole of last year.

NUTMEG OIL AND MACE OIL EXPRESSED.—In spite of scarcity of raw material, especially for making mace paste, these products have not advanced in price. All kinds of inferior nutmegs which are used for distilling and pressing purposes have considerably advanced in price, some by 100 per cent. since last summer.

CUBEB OIL.—Several deliveries of Java cubebs yielded an oil which did not come up to the requirements of some pharmacopœias, in respect of its optical rotation. In order to discover the cause of this unusual phenomenon we have submitted a sample of these cubebs to a professor of the Amsterdam University, the matter being also investigated by English scientists. We hope soon to be able to enter more closely into this question which is not without importance to the Java cultivation.

DILL OIL.—The result of dill growing in the North of Holland has been sufficiently satisfactory to encourage the planting of fennel and aniseed as well. Dutch dillseed is yielding a very good percentage of oil, which is of absolutely faultless quality.

FOREIGN CINCHONA BARK AND QUININE REVIEW.

The shipments of bark from Java in 1911 were about 8 per cent below those of 1910, but still larger than in any other year with the exception of 1907, which closed with a price for second-hand German quinine of about 7½d. per ounce; 7½d. has been the German makers' official quotation for the sulphate since January, 1909, while second hands in the course of last year sold German brands as low as 6d. and Java quinine down to 5⅝d.

The continued official efforts to extend the use of quinine in malarial countries have no doubt been assisted by the low prices; the exports from Germany and England show an increase; the imports into Italy, Eastern countries and also the United States of America are larger. The quinine imports, according to an Indian book review follows:—

	Ounces.
April 1, 1910, to March 31, 1911	2,050,384
April 1, 1909, to March 31, 1910	1,921,792
April 1, 1908, to March 31, 1909	1,280,000

Pills and preparations containing quinine are not included. During the last few months of 1911 the exports to India (chiefly Java quinine) have been fairly heavy. Particulars of local Indian quinine production are not yet to hand. The purchases of bark in Holland on behalf of the Indian Government factories have fallen from 28,000 kilos in 1910 to 9,950 kilos in 1911, which makes it appear probable that Java quinine was imported for government account.

Thus the quinine consumption is all that can be expected, but the apparently unchecked bark production, the high average quinine contents of the Java barks, and the futility of all efforts to effect an understanding among the planters themselves, or among the quinine makers, or planters and manufacturers combined, which would benefit them all largely without hurting anybody, have had the natural consequences of lower average values for quinine and bark. There has been no lack of rumors of impending combinations, and some excitement was witnessed during the latter part of the year when speculative purchases forced the market up to 7¼d. for German quinine on the spot and 7½d. forward delivery, the factories doing a limited business at the latter (their official) figure, while Amsterdam realized 7¼d. and Java 7d. The speculative hopes, easily intelligible in view of the fact that so little is required to change the position for the better, were, however, again doomed, to disappointment, and the market closed dull with sellers of German quinine at 7¼d. Amsterdam at 7d. and Java at 6⅞d. per ounce.

The Bandong quinine factory was able to obtain sufficient bark to permit it to export 75,815 kilos quinine in 1910 and finish the year with a stock in hand of 71,000 kilos quinine (partly in the bark). A new store has been built to house stocks. For last year contracts with the government and private planters are said to have provided the Bandong works with enough bark to yield 80,000 kilos quinine sulphate. Java quinine has found its way into many channels owing to competitive rates, and, being now a more or less established brand, a union with the other makes should now more than ever be of mutual benefit.

Imports of bark from India and Ceylon remain insignificant; Calisayas and other South American barks do not figure in the imports lists at all.

Imports of bark into the United Kingdom follow:—

	1911. Pkgs.	1910. Pkgs.	1909. Pkgs.
Indian	1,744	1,245	1,703
Ceylon	521	354	903
Java	2,993	2,529	601
African	772	187	1,048
Calisaya	....	949	884
Totals	6,030	5,266	5,139

The amounts of sulphate of quinine in the bark sold in auction during the last three years are:—

	Amsterdam, kilos.	London, kilos.	Totals, kilos.
1911	472,037	19,419	491,456
1910	469,979	11,793	481,772
1909	448,509	10,552	459,151

There were 46,600 kilos sulphate of quinine in the bark sold privately in Holland last year.

The average analyses of Java manufacturing barks, offered in public auction at Amsterdam, and average unit prices obtained for the past three years, are as follows:—

	Analyses	Units: Cents.
1911	6.59%	3.11
1910	6.38%	3.15
1909	6.35%	3.06

Stocks of bark December 31:—

	Amsterdam, pkgs.	London, pkgs.
1911	28,459	4,255
1910	28,286	4,664
1909	21,402	4,448

Stocks of quinine sulphate in London according to port of London authority's returns follows:—

	Ounces.
December 31, 1911	3,557,840
December 31, 1910	3,687,376
December 31, 1909	3,281,936

The arrivals of bark in London were:—

	Calisaya, pkgs.	Other South American bark, pkgs.	East India Java & Africa, pkgs.
1911	....	....	6,030
1910	949	....	4,317
1909	884	....	4,255
1908	319	....	3,133
1907	792	....	4,787
1906	536	147	6,992
1905	2,556	917	9,321
1904	3,361	....	6,907
1903	3,968	116	7,442
1902	7,595	155	10,345

The total arrivals in London were:—

	Pkgs.		Pkgs.
1911	6,030	1906	7,675
1910	5,266	1905	12,794
1909	5,139	1904	10,268
1908	3,452	1903	11,526
1907	5,579	1902	18,095

The total sales and reshipments were:—

	Pkgs.		Pkgs.
1911	6,439	1906	10,984
1910	5,050	1905	11,869
1909	4,534	1904	9,640
1908	3,660	1903	14,497
1907	5,387	1902	20,275

Leaving the stocks in London on December 31:—

	Pkgs.		Pkgs.
1911	4,255	1906	3,859
1910	4,664	1905	7,168
1909	4,448	1904	6,243
1908	3,843	1903	5,615
1907	4,051	1902	8,586

ANSTERDAM COCOA BUTTER AUCTIONS.

The following table shows the quantities sold and prices realized for Van Houten's since 1906, quantity being in kilos and prices per one-half kilo in Dutch cents:—

	1906		1907	
	Sold.	Average price.	Sold.	Average price.
January	95,000	65.00	90,000	90.40
February	85,000	65.52	80,000	95.20
March	80,000	67.20	70,000	92.40
April	70,000	67.15	65,000	83.65
May	55,000	68.10	75,000	77.75
June	80,000	68.85	65,000	86.70
July	65,000	68.15	65,000	95.45
August	40,000	70.60	35,000	106.10
September	70,000	76.65	70,000	114.90
October	60,000	84.65	75,000	121.00
November	95,000	81.65	100,000	104.05
December	85,000	83.90	70,000	92.85
Year	880,000	72.45	900,000	96.60

	1908		1909	
	Sold.	Average price.	Sold.	Average price.
January	75,000	91.00	80,000	66.40
February	90,000	86.15	90,000	63.55
March	75,000	80.30	80,000	64.25
April	80,000	82.95	80,000	64.40
May	60,000	80.55	65,000	61.20
June	65,000	76.55	70,000	60.70
July	65,000	76.35	75,000	62.91
August	45,000	84.25	47,000	63.25
September	80,000	78.70	82,000	61.95
October	80,000	73.30	80,000	61.41
November	95,000	69.50	83,000	59.55
December	90,000	70.45	114,000	58.50
Year	900,000	78.80	947,000	62.20

	1910		1911	
	Sold.	Average price.	Sold.	Average price.
January	73,000	59.55	82,000	86.06
February	75,000	61.65	97,000	83.85
March	82,000	60.05	80,000	84.71
April	72,000	61.36	75,000	84.20
May	60,000	60.30	60,000	82.25
June	88,500	61.07½	87,000	101.50
July	81,500	61.16	67,000	102.70
August	52,000	62.26	71,000	102.01
September	74,000	63.85	71,000	102.38
October	81,500	66.85	91,000	98.50
November	100,000	74.56	138,000	80.11
December	110,000	85.50	100,000	73.15
Year	949,500	66.10	1,019,000	89.08

AMSTERDAM STATISTICS OF CINCHONA BARK.

Shipments and Sales and Quinine Auctions Java Cinchona Bark.

SHIPMENTS FROM JAVA TO EUROPE.

	1900. Kilos.	1901. Kilos.	1902. Kilos.	1903. Kilos.
Jan.	307,500	500,000	470,000	296,500
Feb.	320,500	374,000	262,000	330,500
March	325,000	437,500	345,500	525,000
April	265,000	400,000	500,000	537,000
May	408,000	373,000	522,000	594,000
June	433,000	524,000	600,000	609,500
July	314,500	620,000	570,000	617,500
Aug.	488,500	533,500	928,500	550,000
Sept.	683,000	690,000	479,000	698,500
Oct.	550,000	788,500	850,000	1,006,000
Nov.	745,000	599,000	487,000	498,000
Dec.	550,000	650,000	659,000	600,000
Totals	5,390,000	6,390,500	6,673,000	6,862,500

	1904. Kilos.	1905. Kilos.	1906. Kilos.	1907. Kilos.
Jan.	427,500	390,500	298,500	716,500
Feb.	531,000	363,000	372,000	714,000
March	253,000	738,500	392,000	470,000
April	747,500	684,000	521,500	910,000
May	585,000	772,000	621,000	692,500
June	557,000	625,500	727,500	648,500
July	566,000	715,500	721,500	680,000
Aug.	762,500	936,000	764,500	810,000
Sept.	578,500	629,000	645,500	811,500
Oct.	950,000	800,000	667,500	700,000
Nov.	629,000	616,500	744,500	858,000
Dec.	640,000	429,000	282,000	795,000
Totals	7,225,000	7,699,500	6,758,000	8,606,900

	1908. Kilos.	1909. Kilos.	1910. Kilos.	1911. Kilos.
Jan.	630,000	510,500	583,500	710,500
Feb.	407,500	530,500	454,000	473,000
March	444,500	422,500	688,000	746,500
April	652,500	639,500	789,000	518,500
May	727,500	659,500	684,000	725,000
June	756,500	496,000	1,174,000	758,000
July	734,500	864,000	812,000	471,000
Aug.	836,50s	710,000	924,500	864,500
Sept.	557,000	100,800	907,000	886,000
Oct.	678,000	680,000	532,000	767,000
Nov.	569,000	552,000	795,000	794,000
Dec.	785,000	672,500	678,500	594,000
Totals	7,838,500	7,745,000	9,021,500	8,308,000

COMPARISON OF THE AUCTIONS OF CINCHONA BARK AT AMSTERDAM.

	Total packages offered in ten auctions.	Total bark, kilos.	Total quinine, kilos.
1911	103,301	9,139,662	569,954
1910	99,422	8,841,753	532,230
1909	93,311	8,331,742	496,422
1908	90,659	8,224,316	484,954
1907	94,030	8,532,310	543,231
1906	95,601	8,794,480	477,217
1905	100,391	9,092,268	460,197
1904	91,878	8,146,302	389,562
1903	83,404	7,304,845	354,340
1902	78,998	6,894,083	344,003
1901	74,163	6,588,133	326,999
1900	60,591	5,262,142	248,140
1899	65,251	5,583,393	271,259
1898	73,832	6,495,351	321,007
1897	59,606	5,315,173	291,351
1896	63,266	5,765,651	307,342
1895	64,917	5,770,493	283,786
1894	54,234	4,655,325	220,527
1893	57,567	4,909,337	217,797

	Average percentage of manufacturing bark.	Quinine sold, kilos.	Quantity of quinine unsold, in kilos.
1911	6.09@6.93	472,030	97,924
1910	6.05@6.56	470,015	62,215
1909	6.02@6.56	448,640	47,782
1908	6.14@6.53	438,038	46,916
1907	5.68@6.51	461,188	20,760
1906	5.49@6.09	446,282	30,935
1905	5.29@5.88	292,497	107,619
1904	4.58@5.57	357,178	32,384
1903	4.89@5.86	314,680	39,660
1902	5.27@5.87	291,972	52,030
1901	5.10@5.91	300,092	26,907
1900	4.92@5.44	233,887	14,253
1899	5.14@5.69	246,769	24,490
1898	4.88@5.43	237,680	83,327
1897	5.26@6.10	230,674	60,677
1896	5.05@5.83	258,142	49,200
1895	4.63@5.34	194,664	89,122
1894	4.61@5.12	152,287	68,240
1893	4.23@5.02	135,176	82,621

AVERAGE UNITS IN DUTCH CENTS.

Auction.	1911.	1910.	1909.	1908.	1907.	1906.
First	3.06	3.10	3.03	3.42	6.78	4.09
Second	3.03	3.14	3.10	3.58	6.25	4.37
Third	3.08	3.14	3.15	3.54	5.42	4.18
Fourth	3.13	3.51	3.20	3.55	4.67	4.30
Fifth	3.16	3.39	3.10	3.52	4.25	4.24
Sixth	3.22	3.24	3.15	3.18	4.59	4.24
Seventh	3.14	3.09	3.00	3.12	5.09	4.02
Eighth	3.12	3.11	2.98	3.40	4.43	4.14
Ninth	3.07	3.01	2.95	3.32	4.26	4.62
Tenth	3.10	3.04	3.06	3.13	3.71	5.10
Auction.	1905.	1904.	1903.	1902.	1901.	1900.
First	6.15	6.25	6.45	7.45	7.25	8.90
Second	6.55	6.60	8.20	7.95	7.50	10.65
Third	6.30	7.50	7.65	8.60	8.95	10.05
Fourth	5.95	6.90	7.25	8.65	10.00	10.10
Fifth	6.00	6.40	6.20	7.25	10.45	10.35
Sixth	5.80	6.30	6.55	6.10	9.00	10.80
Seventh	5.75	6.25	6.90	4.90	7.60	11.75
Eighth	5.55	6.65	7.45	6.80	8.25	12.25
Ninth	5.20	6.45	7.45	6.65	7.70	10.90
Tenth	4.75	6.30	7.35	6.25	7.65	8.00
Auction.	1899.	1898.	1897.	1896.	1895.	1894.
First	4.70	6.90	2.12	3.00	2.70	3.95
Second	6.70	5.50	2.90	2.82	2.50	4.40
Third	10.90	4.25	3.90	2.80	2.85	4.42
Fourth	8.50	5.20	4.10	2.85	2.92	4.30
Fifth	8.25	4.10	4.20	2.90	2.87	4.10
Sixth	7.60	4.20	4.30	2.85	2.72	4.50
Seventh	6.25	4.06	4.32	2.55	2.60	4.35
Eighth	5.55	4.05	6.27	2.55	2.87	3.12
Ninth	6.80	4.67	7.90	2.17	2.87	3.59
Tenth	7.75	4.87	7.03	2.25	3.00	2.80

QUININE AUCTIONS HELD BY THE AMSTERDAM WORKS DURING 1911.

Date.	Offered, English ounces.	Sold, English ounces.	Price per kilo, florins.
January 13	50,000	25,000	10.20
January 27	50,000	50,000	10.01
February 10	50,000	35,000	10.00¾
March 3	50,000	50,000	10.00
March 17	50,000	30,000	10.00
April 7	50,000	50,000	10.01
April 21	50,000	50,000	10.12
May 12	50,000	50,000	10.26
May 26	50,000	50,000	10.48
June 16	50,000	50,000	10.72
July 7	50,000	50,000	11.20
July 21	50,000	50,000	11.08
August 11	50,000	50,000	10.95
September 1	50,000	50,000	10.77
September 15	50,000	50,000	10.66
October 5	50,000	50,000	10.27
October 20	50,000	50,000	10.33
November 10	50,000	50,000	10.54
November 24	50,000	50,000	11.26
December 15	50,000	50,000	10.99
December 29	50,000	50,000	10.91

ROTTERDAM CARAWAY SEED.

The 1911 crop of this article was in every respect a record one for quantity as well as for quality. The planted area was 8,200 hectares, as against 7,700 hectares in 1910 and 7,100 hectares in 1909. The yield per hectare in the different production regions varied from 40 to 25 bags, and the average for 1911 is estimated at 30 bags per hectare, as against 23 bags per hectare in 1910 and 24 bags per hectare in 1909.

The quality of the whole crop is excellent, fine color and absolutely sound and dry.

In view of the large crop looked for, prices were on the decline already early in the year, and at the time of the first arrivals were as low as 11.50 florins per bag of 50 kilos. But then on rumors (afterward confirmed) of damage to the young plants of the 1912 crop prices differed again, growers refusing to sell their fine new seed as low as that price.

The quotation is now (January, 1912,) 14.50@14.75 florins per bag of 50 kilos for new crop seed, but trade is slow.

No doubt many a hectare planted with young caraway has been and will still be plowed out, and the area for the coming crop will be sensibly smaller than in the previous years, the more so as other grains at the current high prices are more profitable.

Stocks of 1909, 1910 and 1911 seed are large.

TURKISH CANARY SEED.

The campaign of canary seed in the Rodosto market for the year just expired was uninteresting in the extreme. The crop, which promised an unusual large yield, perished to the extent of 50 per cent. last May-June, owing to the lack of rain, and only yielded 100,000 bags. This was not a small render, however, considering that 60,000 bags remained over from the last crop in Turkish primary markets.

Speculative exporters stepped in with their old practices of buying early in the season, to keep prices at a high level, in order to prevent conservative houses from selling ahead for future delivery. They thus did all the selling ahead, but at low prices. Their plan was, that consumers abroad, receiving offers and quotations from the conservative houses, for future delivery, based on the high prices of the day, would not accept the same, but contract in preference with the other parties who offered cheaply. When the time came, however, for the latter to cover the sales they made ahead with such a light heart they found the market very hot; they had sown the wind and harvested the whirlwind. Indeed, prices continued high throughout, and big losses were the consequence. The present stock in Rodosto is 50,000 bags and the price is maintained at £12 per ton c. i. f. to the United States.

The sowings for the new crop will not be effected before the month of March, so that nothing can yet be said as to the 1912 yield of canary seed in Turkey.

NEWFOUNDLAND CODLIVER OIL.

This year opened with greater prospects for business than we have seen for several years past. The comparatively small production at the Lofoten fishery had enhanced prices considerably. This was the opportunity that Newfoundland was looking for to expand its business. Undoubtedly those prosecuting the Finmarken fishery viewed matters from the same standpoint, as the production of oil from that source was very successful, so much so that the increased production brought down prices.

Notwithstanding the decline in price a great deal of interest was taken in the manufacture of our best medicinal oil, and had the season turned out a good one there would have been a large quantity of oil refined.

We have often heard reports from Norway of the very poor condition of cod livers and it has often been our boast that the yield of oil from the Newfoundland cod livers has always been a normal one. Not in twenty years has the writer ever experienced such a poor condition of the livers as happened here this year. Reports from all our factories were the same. It took about eight gallons of liver to make one gallon of refined oil during June and July. Not until September did we secure the really choice livers that we always look for. Owing to the exceedingly high prices of the common cod oil the past two years, our fishermen would not sell the livers unless good prices were obtained. The result of high prices paid for livers and the very poor yield of oil prevented any factory from making a profit on the business.

Fortunately for Newfoundlanders the catch of codfish was exceedingly good and prices of fish being very high this will undoubtedly be one of the most prosperous years that Newfoundland has ever seen.

Now let us look at the bright side of the cod liver oil business. The Newfoundland Government in its desire to help along every industry engaged the services of M. B. Simonsen, a skilled expert who has had many years experience at the Lofoten Islands in Norway, to instruct and inspect all codliver oil factories and to insist that the highest standard possible be established for this manufacture.

Mr. Simonsen in a recent report to the government says he visited 78 factories and not alone instructed the managers how to manufacture the best oil, but he gave practical demonstrations himself, showing all how the very choicest oil is produced in Norway.

After six months practical work, the Minister of Marine & Fisheries and all interested in this business are gratified with the success of his efforts. Recently the Council of the Board of Trade on the recommendation of the principal merchants petitioned the government to extend Mr. Simonsen's engagement for at least three years and offered to pay a part of his salary so that they could have a more direct control of his services.

Mr. Simonsen tells us that after his experience here the past season he is thoroughly convinced that there is a great future for Newfoundland codliver oil. At the first of the season he found the livers in very poor condition, but during September and October they improved in quality to such an extent that he has no hesitation in saying that he never saw their equal in Norway, and from this he reasons that when his methods for the manufacture of oil are carried out more perfectly that he will produce in Newfoundland a far superior oil to any in Norway. His reason for this belief is very simple. The condition of the liver depends upon the food supply of the fish. In Norway during January, February and March, when the Lofoten fishery is carried on, there is practically no supply of bait food to be had there and the fishermen themselves have to make preparations for their bait requirements two and three months previous. They have to bring bait 500 to 800 miles to the Lofoten Islands and this cost alone is a tax of over $100,000 on that fishery.

In Newfoundland it is totally different, the waters are teeming with bait food supplies throughout the season and it is very rarely you find a Newfoundland fisherman saving enough bait even for a week much less to think of paying one dollar for it. He fully expects to get all the bait he wants or can use as he needs it.

Mr. Simonsen says he can readily detect at once from the condition of the livers when the codfish are being starved or feeding on inferior food. He is enthusiastic in his statement over the quality of livers obtained in September and October, when there is a large supply of squid bait (cuttle fish) frequenting our shores.

There are no available statistics of the quantity of codliver oil manufactured the past season, as the government returns are only complied to the 30th of June of each year, but it will undoubtedly be very small.

The exports from Newfoundland for the past seven years will show the quantity each year:—

	Gallons.		Gallons.
1903-4	191,403	1907-8	48,015
1904-5	114,506	1908-9	93,780
1905-6	59,781	1909-10	83,999
1906-7	51,547		

NORWEGIAN CODLIVER OIL.

Aalesund.

The stock of steam-refined codliver oil in Norway from 1910 were in the beginning of 1911 estimated at more than 20,000 barrels. The total crop of oil produced in 1911 amounted to 43,318 hectoliters of crude oil or in clarified nonfreezing state about 33,600 barrels. Consequently, the total crop at disposal was also in 1911 more than an ordinary consumption would require.

The fishing in Lofoten did not commence before late in February and had up to the end of that month only reached one million of fish with a production of 700 barrels of crude oil. To one hectoliter of liver 360 to 500 fish were required and the liver yielded from 35 to 45 per cent. of crude oil, which was about 10 per cent. less than in 1910.

Prospects were not at all good, the fishing continued poor during the greater part of March. Speculation set in and prices advanced to $.34, at the end of March at $.42. At the same time very high prices were paid for the liver at the fishing places. The fishing in Finmarken commenced already in the beginning of April under favorable auspices, which caused buyers to be reluctant and prices commenced to drop. In the beginning of May the fishing in Finmarken improved considerably, the price for livers dropped, and the price for oil declined still further, to $.28, end of May. The prices was maintained during the summer. In September holders of oil tried to raise the price, which later in the season went down to about $.27.

The past year brought great losses to producers of oil in Lofoten. Holders believe still leaner liver will prevail this year, but it is too early as yet to predict anything as to this.

The Lofoten and total production of oil in Norway amounted to:—

	Lofoten, hectoliters.	Total Norway, hectoliters.
1911	7,871	43,318
1910	13,457	41,024
1909	20,002	50,460
1908	20,095	59,104
1907	20,365	46,960
1906	16,952	42,908

The 1911 codfisheries commenced under very bad auspices. Stormy weather prevailed during January and February along the whole coast of Norway, hindering the fishing materially. At the end of February the weather became calmer and the fishing increased, especially in the southern districts.

In Lofoten the absence of fish was dominant during the whole season, which ended April 25. The catch of cod amounted then to ten and one-half millions, yielding 7,871 hectoliters of codliver oil, which is the smallest quantity of oil manufactured in Lofoten since 1904. The codfish and livers were still leaner than in 1910.

In Finmarken the fishing was richer than ever before. The fish and livers were also there leaner—giving a less oil per cent.

The total quantity of oil for the whole country amounted to 43,318 hectoliers.

PRICES.—On account of the bad weather which hindered the fishing during January and February, the prices advanced very rapidly during March and April, but declined again successively on account of the rich fishing in Finmarken.

The tables beneath show the total production of codliver oil as well as the export and f. o. b. prices in Norway during the last five years:—

PRODUCTION OF UNREFINED CODLIVER OIL.

	Hectoliters.
1907	46,896
1908	59,104
1909	50,460
1910	41,024
1911	43,318

EXPORTS OF REFINED OIL.

	Barrels (114 liters).
1907	38,135
1908	48,000
1909	39,850
1910	36,991
1911	39,332

F. O. B. PRICES IN NORWAY.

	Per barrel.
1907	$25.00@17.00
1908	13.50@15.00
1909	14.00@16.00
1910	25.00@26.00
1911	45.00@25.00

SPONGE FISHERIES.

The returns of various descriptions of sponges, the product of the territorial waters of the Bahama Islands, the world's greatest mart for the cheaper grades of sponges are here given, representing the total sales by auction on the Nassau Sponge Exchange:—

1907.

	£	s.	d.
Sheepswool and velvet	62,646	0	0
Reef	9,051	18	7
Glove	232	12	6
Yellow	3,670	18	9
Hard head	2,569	2	8
Grass	18,849	7	7
Total	£97,620	0	1

1908.

	£	s.	d.
Sheepswool and velvet	31,135	18	7
Reef	7,493	13	2
Glove	148	5	10
Yellow	1,799	16	6
Hard head	1,855	15	0
Grass	7,993	2	1
Total	£50,606	11	2

1909.	£	s.	d.
Sheepswool and velvet	42,921	6	7
Reef	9,937	16	8
Glove	208	13	11
Yellow	2,503	5	1
Hard head	3,063	7	7
Grass	10,990	14	7
Total	£69,685	4	5

The sales of all varieties, sizes and qualities for 1910 amounted to £83,289 16s., and the crop of 1911 brought £71,703 2s. 4d.

A fair average price ruling at Nassau where songes are duly clipped, assorted in uniform sizes and compressed in bales, is as follows:—

	Per lb.
Abaco Sheepswool—	
Medium No. 1	$2.25
Medium small	2.00
Small	1.12
Medium large	1.80
Large	1.70
Medium cut	2.25
Medium small cut	1.70
Medium No. 2	1.25
Cay Sheepswool—	
Medium	1.80
Medium small	1.60
Small	1.00
Medium cut	1.80
Medium large	1.70
Large	1.60
No. 2	1.25
No. 3	.25
Abaco Velvet—	
Medium	1.60
Medium small	1.26
Small	.72
No. 2	.80
Cay Velvet—	
Medium	1.15
Medium small	1.05
Small	.80
Cut	1.15
Grass Nassau—	
Medium prime	.60
Medium small	.60
Small	.50
Ex. small	.36
No. 2	.36
No. 3	.06
Prime cuts, medium	.60
Extra select bleachers	.84
Reef	1.68
Reef No. 2	.75
Reef, small cut	.25
Glove	.75
Glove, No 2	.25
Yellow medium	.72
Yellow No. 2	.36
Hard head	.84
Hard head, No. 2	.36
Hard head, small cut	.30

The crop of Bahama sponges is gathered entirely by the original hooking method, diving as now in vogue on the west coast of Florida having been deemed not feasible. The sponge industry continues to be the leading one of the islands and gives employment to some 5,000 people. Various sponging grounds have been given a chance to recouperate with good results, showing that if beds are not worked too frequently and the young sponges unmolested, the beds provide a new crop and a closed period is undoubtedly the proper remedy for the best interests of this important industry. The year 1911 was a good one for vessel owners and sponges and all were thankful that no destructive hurricanes visited the fisheries.

ZANZIBAR CLOVE SITUATION.

This season's crop may be compared to that of 1907 and 1908, being picked in the same manner. The government has sent labor to Pemba to pick the crop as quickly as possible to secure the whole quantity, and we got, therefore, some three months of big arrivals, the same as in August and October, 1907, and then at once a very sharp falling off. As a rule, the second picking can be only very small if the first crop is gathered in a hurry, as now has been done, and, moreover, the labor sent out has no experience how to pick the crop and spare the trees. The total crop will give some 150,000@160,000 bales, of which to the close of 1911 120,000 bales are coming to market.

A big crop as we get this season, 1911-1912, may be followed, as a rule, by a moderate one, and as stocks in general are very light, 30,000@35,000 bales for Europe and America, there is no reason to expect any increase of importance, as consumption is good, and especially Bombay is reported to be a keen buyer.

ARRIVALS AT ZANZIBAR.

	Crop 1907-1908. Bales.	Crop 1911-1912. Bales.
July	6,000	....
August	28,000	5,000
September	42,000	21,000
October	40,000	36,000
November	18,000	40,000
December	12,000	20,000
Totals	146,000	122,000

TOTAL CROPS.

	Bales.
1898-1899	150,000
1899-1900	50,000
1900-1901	65,000
1901-1902	90,000
1902-1903	105,000
1903-1904	35,000
1904-1905	190,000
1905-1906	65,000
1906-1907	60,000
1907-1908	190,000
1908-1909	140,000
1909-1910	100,000
1910-1911	70,000
1911-1912	*150,000

*Estimated.

Stocks in Europe and America on December 31, 1911, were 30,000@35,000 bales, against the following quantities at the same day of the last twelve years:—

	Bales.
1910	49,000
1909	84,000
1908	93,000
1907	60,000
1906	35,000
1905	38,000
1904	36,000
1903	41,000
1902	68,000
1901	94,000
1900	110,000
1899	117,000

QUOTATIONS FOR SPOT IN HOLLAND.

	High. Cents per ½ kilo.	Low. Cents per ½ kilo.
1903	38	19½
1904	47¼	27¼
1905	37¾	23
1906	41	30
1907	46¾	26
1908	29	23
1909	29½	23½
1910	39½	26
1911	43½	27½

The quotation December 27, 1911, was 28¼c.

NEW YORK PAINT MARKET.

Several untoward factors contributed to interfere with the progress of the paint trade in 1911. Opinion is divided as to whether the high cost of raw materials or the unsettled conditions of the industries, which are large consumers of paints, was more to blame for the quiet conditions of the general paint trade. In many cases painting had been deferred for two or three years or even longer and it was asserted that reasons of economy would compel owners to protect this property by having it painted, but the year came to an end without the heavy demand from this source that had been expected. Large companies whose holdings naturally require a large quantity of paints are clinging to a policy of retrenchment which came into existence with the monetary panic of 1907 and which seems to have been kept alive through fears of depressed industrial conditions. The building trades have been fairly active during the year and the painting demand from that quarter has been fairly normal. The year is reported as unusually poor for the large hotel keepers and the call for painting materials for the up-keep of such structures has suffered accordingly. Railroads cut down their equipment orders and consumed less paint in renovating their buildings, bridges, etc. The high price of linseed oil must be reckoned with in summarizing conditions for the year, for it undoubtedly exerted a big influence on the general activity of the market. People with several houses to paint have held off, waiting for cheaper prices and this feeling also affected the owners of single houses, although high prices of materials will not greatly affect the latter. Estimates of the flax crop are not reliable, although it is sure that Argentine will not come up to early predictions. The apparent supply of seed is such, however, that men well posted in the trade say prices will not go above present levels. Turpentine is another disturbing factor in the market, and as the forests which once were supposed inexhaustible are becoming thinned out, it is predicted that at the present rate of consumption the supply of turpentine will not last for twenty years more.

With the growth of country it is interesting to note that the paint trade likewise is expanding. The Bureau of Census in its preliminary statement of thirteenth census of establishments engaged in the manufacture of paint and varnish shows increases in all the items at the census of 1909 as compared with that for 1904. There were 791 establishments engaged in the industry in 1909 and 639 in 1904, an increase of 24 per cent. The capital invested in 1909 was $103,995,000, a gain of $28,509,000, or 38 per cent., over $75,486,000 in 1904. The value of products was $124,889,000 in 1909 and $90,840,000 in 1904, an increase of $34,049,000, or 37 per cent.

The total number of pounds of pigments produced in 1909 was 814,556,379, compared with 562,786,177 in 1904, a gain of 45 per cent. Of this total 144,472,173 pounds in 1909 and 161,539,201 in 1904 were reported by establishments engaged primarily in the manufacture of other products; and 167,228,514 pounds in 1909 and 189,354,000 in 1904 were consumed by establishments making it in further processes.

No total figures can be given for paints in oil, as units of measure differ, and there are establishments making such paints as by-products the operations of which would be disclosed. The total quantity cannot be shown for white lead in oil, as the operations of individual establishments making it as a by-product would be disclosed. There were reported by establishments making it as a chief product 246,567,570 pounds in 1909 and 216,496,450 in 1904, an increase of 14 per cent. The total quantity of paste in oil reported was 165,038,353 pounds in 1909 and 134,280,000 in 1904, an increase of 23 per cent. Of paint already mixed for use a total of 34,280,417 gallons was reported in 1909 and 22,755,018 in 1904, an increase of 51 per cent.

The total quantity of varnishes made in 1909 was 34,009,083 gallons and 19,943,526 in 1904, an increase of 71 per cent. The quantity of this total consumed by establishments where manufactured was 4,407,312 gallons in 1909 and 613,684 in 1904.

Of the articles which are reported to have gained in consumption in 1911 may be mentioned zincs, blacks in the dry color list, and of the miscellaneous list such articles as barytes, chalk, whiting and lithopone, although these miscellaneous articles do not owe all their activity to demand from the paint trade. Varnish gums made a fine record in the closing months of the year, but could not overcome the handicap of the slower seasons earlier in the year. China wood oil occupied a peculiar position late in the year, as the revolution in China cut off shipments and available supplies became very meager, which had the effect of raising prices to record figures. White lead is reported as showing a slight decline, although lower prices in the latter part of the year brought forth a number of large orders, and some large dealers say the business was about on a par with that of 1910. The lead oxides were in accord with the general market and showed no gain over the preceding year, although prices were lowered to a point where the manufacturer is said to derive but little profit.

Pig Lead.

According to the preliminary figures of the United States Geological Survey, production of lead in 1911 was greater than in any previous year. Figures for the last five years are as follows:—

	*Production.	Available for consumption.
1907	414,189	373,140
1908	396,433	318,151
1909	448,112	370,013
1910	470,380	376,021
1911	487,520	391,000

*Includes lead made from foreign ores.

In St. Louis receipts and shipments of lead for the year were as follows:—

	Receipts, pigs.	Shipments, pigs.
1911	2,399,190	1,539,950
1910	2,639,740	1,659,130

The year opened with 4.50c. as the quotation price and this price was maintained by leading holders until the first week of October, but in the meantime second-hand sales were made at varying prices, 4.37½c. being quoted at one time and as high as 4.65c. at another. In the first week of October the price declined to 4.35c. and a few days later this was followed by a further decline and 4.25 succeeded as the official quotation. A month later an increase to 4.35c. was announced and about the first of December 4.45@4.50c. was held by sellers. The following table gives the price changes from January, 1905, to December, 1911, inclusive:—

	1907.	1908.	1909.	1910.	1911.
Jan	6.10	3.60	4.10	4.70	4.50
Feb	6.10	3.75	3.97½	4.65	4.50
March	6.10	3.70	3.92½	4.50	4.50
April	6.10	3.80	4.15	4.40	4.50
May	5.85	4.05	4.25	4.30	4.50
June	5.85	4.50	4.35	4.37½	4.50
July	5.38	4.40	4.30	4.40	4.50
Aug	5.35	4.70	4.35	4.45	4.50
Sept	4.95	4.50	4.37½	4.42½	4.50
Oct	4.85	4.30	4.37½	4.40	4.25
Nov	4.05	4.35	4.40	4.50	4.35
Dec	3.60	4.12½	4.70	4.50	4.45

The following table shows the production of refined lead, in tons of 2,240 lbs., in the United States, from 1900 to 1911, inclusive:—

	Desilvered.	Soft lead.	Total production.
1900	329,658	48,021	377,679
1901	323,790	57,898	381,688
1902	303,011	74,050	377,061
1903	295,074	83,444	378,518
1904	315,284	89,169	404,453
1905	296,186	103,116	399,302
1906	313,886	90,860	404,746
1907	314,241	99,948	414,189
1909	295,420	101,013	396,433
1909	329,310	118,802	448,112
1910	329,062	141,318	470,380
1911	298,134	189,386	487,520

In the London market there was scarcely any change noted in consumption of lead as compared with 1911, the figures being 208,909 tons for 1911, and 210,268 tons for 1910. The trade on the Continent, especially in Germany, made considerable progress. The average price for the year was £13 19s. 3d., against £12 19s. in 1910. The highest price was £16 and the lowest £12 16s. 3d.

White Lead.

Conditions in the market for white lead were not entirely satisfactory. In the first place the consumption of white lead did not increase and while some large producers claim the consumption was equal to that of 1910 it is generally held that the past year showed a decline. Many substitutes for white lead were used by paint mixers and stronger competition was met from paints made from lithopone. The growing use of lithopone must be a drawback to the use of white lead since the zinc sulphide content of lithopone causes lead to turn black and therefore precludes the possibility of mixing the two in paints. The price of white lead was very steady, opening at 5½@6c., and no change was made in these figures until late in October, when large buyers were granted price concessions, and quantities of white lead passed at 5c., although the quotation prices at that time were quoted as unchanged. When these sales became known, however, a general decline in price was announced and quotations read 5¼@5¾c., at which figures the year closed. Pig lead recorded an increase in price shortly after the lower values for white lead were announced, and this action was unfavorable to certain corroders, who were forced to take on stocks at that time. Lead in oil was quoted at 7¼@7½c. at the beginning of the year and remained unchanged until November, when dry white lead was reduced and at that time there were heavy accumulations of lead in oil, and price concessions were made in order to reduce stocks, and 7c. was quoted from then until the end of the year. Sublimed white lead opened at 5⅝@5½c., and remained at those figures until November, when 5@5¼c. was quoted, and this was the only change made during the year.

The following table shows the price of dry white lead for each month from January, 1907, to December, 1911, inclusive:—

	1907.	1908.	1909.	1910.	1911.
Jan	6⅝	5½@6	5⅝@5½	5⅝@6¼	5½@6
Feb	6⅝	5½@6	5⅝@5½	5⅜@6¼	5¼@6
Mar	6⅝	5½@6	5⅝@5½	5⅜@6¼	5¼@6
April	6⅝	5½@6	5⅝@5½	5⅜@6¼	5¼@6
May	6⅝	5½@6	5⅝@5½	5⅜@6¼	5¼@6
June	6⅝	5⅝@6	5⅝@5½	5⅜@6	5¼@6
July	6⅝	5⅝@6	5⅝@5½	5⅜@6	5¼@6
Aug	6⅝	5⅝@6	5⅝@5½	5⅜@6	5¼@6
Sept	6⅝	5⅝@6	5⅝@5½	5⅜@6	5¼@6
Oct	6½	5⅝@5¾	5⅝@5½	5⅜@6	5¼@5¾
Nov	6½	5⅝@5½	5⅝@5½	5½@6	5¼@5¾
Dec	6½@5⅝	5⅝@5½	5⅝@6	5½@6	5¼@5¾

Red Lead.

Trading in red lead was along quiet lines and was retarded by the general slowness of the paint trade. Competition was rather keen and had an effect on prices, as considerable shading is reported to have been done throughout the early part of the year. At the beginning of the year domestic was quoted at 6½@7¼c. and foreign at 9c. These prices were quoted until the latter part of July, when slow inquiry and lack of new business brought a decline to 6½@7c. for American and 8½@9c. for foreign, and large buyers were reported to have been accommodated at 6¾c., although this price was not quoted nor was it offered generally, as many producers of the oxide claimed it could not be sold at that price with profit to the seller.

The price changes for the past five years are indicated in the following table, which gives the quotation prices each month for the years mentioned:—

	1907. H.	1907. L.	1908. H.	1908. L.	1909. H.	1909. L.	1910. H.	1910. L.	1911. H.	1911. L.
Jan	7¼	7½	6⅝	6½	7	6⅝	7¼	6½	7¼	6½
Feb	7¼	7½	6⅝	6½	7	6¾	7¼	6¾	7¼	6½
March	7½	7½	6⅝	6½	7	6⅝	7¼	6⅝	7¼	6½
April	7½	7½	6⅝	6½	7	6¾	7¼	6⅝	7¼	6½
May	7½	7½	6⅝	6½	7	6¾	7¼	6⅝	7¼	6½
June	7½	7½	6⅝	6½	7	6¾	7¼	6⅝	7¼	6½
July	7½	7½	7	6⅝	7	6¾	7¼	6½	7	6½
Aug	7½	7½	7	6⅝	7	6¾	7¼	6½	7	6½
Sept	7½	7	7	6⅝	7	6¾	7¼	6½	7	6½
Oct	7	7	7	6⅝	7	6¾	7¼	6½	7	6½
Nov	7	7	7	6⅝	7	6¾	7¼	6½	7	6½
Dec	7	6¾	7	6⅝	7	6½	7¼	6½	7	6½

Litharge.

Litharge has been in demand from various industries, such as the paint, glass and rubber trade, yet the total consumption does not vary much from that of 1910, and is even placed at lower figures. The market has been stimulated by keen competition on the part of sellers, and prices are low compared with those of other years. The unchanged position of pig lead for so many months of the year caused a steadiness in the price of litharge, and opening at 5¾@6c. for domestic and 9¼c. for foreign, the quotation was maintained until late in May, when the foreign product was advanced to 9⅝c. The domestic product was nominally unchanged, but shading was a general practice and large quantities sold at 5½c., and later in the year this price was quoted. It is even reported that sales were made at 5¼c., but if so it was only in isolated cases, and the latter figure is not a true index of the market quotation at any period of the year.

The subjoined table shows the highest and lowest quotations of American litharge in the local market for the past five years:—

	1907. H.	1907. L.	1908. H.	1908. L.	1909. H.	1909. L.	1910. H.	1910. L.	1911. H.	1911. L.
Jan	7½	7½	6⅝	6½	7	6⅜	6⅝	5¾	6	5⅝
Feb	7½	7½	6⅝	6½	7	6	6⅝	6¼	6	5⅝
March	7½	7½	6⅝	6½	6¼	5⅜	6⅝	6¼	6	5⅝
April	7½	7½	6⅝	6½	6¼	5⅜	6⅝	6¼	6	5⅝
May	7½	7½	6⅝	6½	6¼	5½	6⅝	6¼	6	5⅝
June	7½	7½	7	6⅝	6¼	5½	6	5⅝	6	5⅝
July	7½	7½	7	6⅝	6¼	5½	6	5⅝	6	5⅝
Aug	7½	7½	7	6⅝	6¼	5½	6	5⅝	6	5⅝
Sept	7½	7	7	6⅝	6¼	5½	6	5⅝	6	5½
Oct	7	7	7	6⅝	6¼	5½	6	5⅝	6	5½
Nov	7	7	7	6⅝	6¼	5½	6	5⅝	6	5½
Dec	7	6¾	7	6⅝	6¼	5⅝	6	5⅝	6	5½

Orange Mineral.

Orange mineral experienced an uneventful year, and routine conditions prevailed at all times. Dry color makers did not consume as much orange mineral as in 1910, and demand from that source was somewhat diminished. The bulk of trading was on contract orders and at certain periods of the year new business was almost entirely absent, and at no time was the jobbing demand strong enough to disturb the even tenor of the market. Prices have not been changed since early in 1909, and throughout the year 8½@10c. was held for American and 12@13c. for French.

A comparative study of prices for domestic orange mineral is afforded by the following table covering the past three years:—

	1909. H.	1909. L.	1910. H.	1910. L.	1911. H.	1911. L.
January	10	9	10	8½	10	8½
February	10	8½	10	8½	10	8½
March	10	8½	10	8½	10	8½
April	10	8½	10	8½	10	8½
May	10	8½	10	8½	10	8½
June	10	8½	10	8½	10	8½
July	10	8½	10	8½	10	8½
August	10	8½	10	8½	10	8½
September	10	8½	10	8½	10	8½
October	10	8½	10	8½	10	8½
November	10	8½	10	8½	10	8½
December	10	8½	10	8½	10	8½

Zincs.

Manufacturers of zincs report a good year and this is asserted both for

foreign and domestic brands. The vagaries of the spelter market were responsible for some price changes in the market for zincs. Domestic grades, however, have been very steady, and but one change was noted during the year. Prices opened at 5⅞@6½c. for American zinc; 8¼@8½c. French red seal; 10¼@10½c. green seal; German brands (French process), 7½@7¾c., red seal; 7¾@8¾c., green seal; 8¾@9⅛c., white seal. The market opened with changes in price, and business was with with nothing to disturb the activity of the market. American zinc was reduced to 5¼@6¼c. in November, due to lower spelter values. Foreign grades were affected more by the spelter market, and in July prices were advanced to 7½@8c. for red seal; 8@9c. for green seal; 9@9⅞c. for white seal. In October another change was made and quotations read:—7¾@8¼c. for red seal; 8¼@8¾c. for green seal; 9@9¼c. for white seal. These quotations are ex-dock, and store prices rule ¼c. per pound higher.

Dry Colors.

Makers of dry colors report a rather unsatisfactory year, with business showing no gain over that of 1910. The fall months were especially slow and counterbalanced the activity shown earlier in the year. Blacks as usual were the leaders of the market from the point of activity and production of the various grades is said to have shown a gratifying increase. But the demand for blacks is wider than for the other colors as it is used in several industries and activity of blacks does not depend entirely upon consumption within the paint trade. Reds, blues and yellows have passed an ordinary year with demand about normal and prices steady throughout the year, except for carmine, which increased in price owing to higher values for cochineal. Paris green moved freely as soon as prices were established in April. These prices were lower than those established in 1909 and were as follows:—For quantities of 10,000 pounds or over, arsenic kegs, 13c. per pound; 100 to 175-pound kegs, 13½c. per pound; 14, 28 and 56-pound kits, 14½c. per pound; 2 and 5-pound boxes, 15c. per pound; 1-pound boxes, 16c. per pound; ½-pound boxes, 17c. per pound; ¼-pound boxes, 18c. per pound; in quantities from 5,000 to 10,000 pounds, ½c. per pound advance; in quantities of 1,000 to 5,000 pounds, 1½c. per pound advance; in quantities of 500 to 1,000 pounds, 2½c. per pound advance; in quantities of less than 500 pounds, 3½c. per pound advance. This market was featured by another change late in the year when prices for 1912 were established on a new and lower basis, which is as follows:—Arsenic, kegs, 11c.; 100 to 175-pound kegs, 11½c.; 14, 28 and 56-pound kits, 12½c.; 2 and 5-pound boxes, 13c.; 1-pound boxes, 14c.; ½-pound boxes, 15c.; ¼-pound boxes, 16c. During the early spring it was thought that a scarcity of natural gas would keep up the prices of carbon gas blacks, but this situation improved and prices were lowered during the year, the closing quotations being 5@8c. for wax, 3@5c. for bone and drop, 6¾@8c. for carbon gas, 4@10c. for lamp blacks, $21@25 per ton for mineral blacks.

Metallic Paints.

Dealers in metallic paints say that everything considered the year for metallic paints was favorable. No increase in consumption is reported, but paint grinders are claimed to show a disposition to use metallic paints more extensively in preparing their goods for the market and the direct use of metallics in covering tin roofs, bridges, freight cars and similar articles is becoming more and more widespread, so that dealers expect a heavy increase in sales as soon as the general paint market becomes active again. Railroads and other equipment companies did not buy as heavily as expected during the year, but this was due to a policy of retrenchment and not to the use of other paints in place of metallics. Prices have remained steady, but there is considerable range covering quality and quantity. $18@20 is quoted for metallics of high content of oxide of iron and $16.50 for other grades; these quotations are for brown metallics, reds being held at $14@18.

Fuller's Earth.

Fuller's earth is not an important article in the paint trade, but there is always a steady though slow demand and the cheapness of the article recommends it for use whenever available. Some good sized orders were placed early in the year and were drawn on as the season advanced, but trading is mainly of a jobbing character. The market was more active than usual in fall just before the water route to the West was closed. Prices are held unchanged at 80@85c. per 100 pounds. Figures for 1911, showing domestic production, are not at hand, but the United States Geological Survey issues the following regarding production for 1901 to 1910 inclusive:—

	Short tons.		Short tons.
1901	14,112	1905	32,040
1902	11,492	1907	32,851
1903	20,693	1908	29,714
1904	29,480	1909	33,486
1905	25,178	1910	32,822

Lithopone.

Lithopone is one of the articles of the market which shows considerable advance in consumption in the face of a slow general market. This is due to the expansive use of the article in different industries. Among its uses may be mentioned, in the manufacture of linoleums and oil cloths, as a coloring matter in the rubber trades, in paint manufactures, in implement making. Various grades of lithopone are on the market, but for the paint trade the most desirable is lithopone composed of 30.5 per cent. zinc sulphide, 1.5 per cent. zinc oxide, 68 per cent. barium sulphate. This is the highest grade and is sold as red seal or green seal, although in the trade it is popularly known as "30 per cent." lithopone. The feature of the past year has been the growth of domestic lithopone. A short time ago practically all the lithopone used in this country was imported from Germany, but now domestic production is greater foreign importations and the ratio is gradually widening in favor of the domestic article. Prices were steady throughout the year, and the best grade was held firm at 3¾@4c., although some sales of second hands or off grades were made at lower figures.

Putty.

Putty was in a poor position all through the year and was affected by the high price of linseed oil, but most of all by the demoralized condition of the window glass trade. As a matter of fact the business was about equal to that of 1910 as was likewise the case with window glass, but trading at all times was uncertain and the fear of a practical cessation in production of window glass overshadowed the putty market and prevented liberal buying. Small sales characterized the year, but the spring trade was fairly good and the slow summer months were succeeded by job trading in the fall which totaled a large volume of business. Prices at the beginning of the year were quoted at:—$2@2.50 for 100-pound tubs, $2.40@2.60 for 12½, 25 and 50-pound tins; $3.50@4.50 for 1, 2, 3 and 5-pound tins; $2.60@3 in bladders. These prices were increased in March under the stress of record prices of linseed oil, to the following:—$2.75@2.90 for 100-pound tubs, $3.10@3.35 for 12½, 25 and 50-pound tins; $4.25@4.60 for 1, 2, 3 and 5-pound tins; $3.35@3.50 in bladders. These prices are for pure linseed oil putty and they remained at these levels for the balance of the year.

Talc.

The high prices prevailing at the beginning of the year for French and Italian talc was a bar to heavy trading and consumers were taking only such quantities of foreign talc as they were forced to do in order to meet their immediate requirements. The quotation prices were $33@40 for French, $47@50 for Italian, $15@20 for domestic. These prices were held unchanged until June, when the Court of Customs Appeals gave their decision reversing the opinion of the Board of General Appraisers in holding that powdered talc was French chalk and as such was dutiable as an unenumerated manufactured article. This decision was of the utmost importance to the trade and meant that foreign talc could be imported at 20 per cent. ad valorem instead of at the rate of 1c. per pound, which the customs authorities had demanded. At once a decline in prices was announced and quotations were given as $15@25 for French, $30@35 for Italian, $15@20 for domestic. These prices aroused considerable interest in the market and importations continued heavy right up to the end of the year, although the closing of the Western water route slowed up the market a little in December.

Terra Alba.

Prices for the various grades of terra alba were quoted at 75@80c. per 100 pounds for No. 1, 60@65c. per 100 pounds for No. 2, 90c.@$1 for French and no change was made at any time in the year. The market was at all times steady, with no spasmodic movements. In addition to the demand from the paint trade, terra alba was taken by the textile, paper and molding trades. Some of the larger consumers placed orders covering future delivery, but the low price of the article and its steadiness on the market caused many consumers to buy according to their needs and trading of this sort was in the majority.

Whiting.

The first half of the year recorded a large decrease in the demand for whiting, and indications pointed to a poor year for this article, but the fall trade came with a rush and was so much larger than usual that consumption for the year showed a good gain over 1910, and some of the largest manufacturers of whiting claimed that it was the best year in their history. The rubber trade proved a heavy buyer during the fall months, and increased demand was felt at that time from the paint trade. The West was a heavy consumer of whiting in the latter part of the year, and until the water route was closed heavy consignments were made at regular intervals. At one time stocks became rather depleted and the local market was strongly drawn upon by Philadelphia, Boston and other Eastern markets where no stocks were available. Business for the most part was on contract orders, but strong jobbing demand was in existence at various times during the year. At the beginning of the year prices were quoted at 50@55c. for commercial; 57@67c. for gliders; 69@80c. for Paris white; 80c.@$1.15 for English cliffstone, and these prices were held until the fall, when quotations were revised to read as follows:—42@50c., per 100 pounds, for commercial; 52@64c. for gliders; 64@75c. for Paris white; 75c.@$1 for English cliffstone. These lower prices attracted heavy buyers to the market and the market closed active with no further price changes.

Glues.

Conditions in the glue market were far from satisfactory. The scarcity of bones and the high prices for all animal matter used in the manufacture of glues kept prices up to high levels and prevented consumers from buying heavily. Similar conditions prevailed abroad, and prices of foreign glues and glue stocks were higher than usual. The season was slow in getting under way, with the wall paper and paper box trades reluctant to enter the market while prices were high. The cheaper grades were in better demand than high-grade stocks and low-grade bone glues sold fairly well at all times. Many factories were closed during the summer and stock was taken pretty generally by manufacturers, and output later in the year was regulated so as not to cause heavy accumulations of stock. During the latter part of the year prices eased off a little on foreign stocks and imports reached this country in large quantities. The government figures of export show that imports of glue were as follows:—1911, 8,094,051 pounds; 1910, 9,005,853 pounds; 1909, 7,718,780 pounds. Buyers were calling for lower prices all through the year, but sellers maintained that the high cost of raw materials prevented any reduction and the year closed with no changes in price.

Varnish Gums.

Varnish gums began the year with a rather slow movement and many varnish manufacturers were said to be taking stock. Shortly after the beginning of the year manila nubs and chips advanced one-eighth of a cent per pound owing to higher values at the primary markets. The activity of the gum market, however, was in no way stimulated and the month closed with very ordinary business. February saw greater activity in gums. In the first place the melting season was at hand and manufacturers needed supplies and at this time rosin had increased in price so that the natural tendency was to use varnish gums. Kauri gum was in especial demand at this time, the inference being that the gum was intended for making automobile varnish and for this purpose large quantities of the better grades of Kauri were being melted. As the season advanced and linseed oil soared in price the use of gums diminished and the summer months were dull in the gum market. In the fall business began to pick up and the first part of October all grades of Kauri gums were reduced in price from one to three cents per pound because of lower values in the primary market. This attracted business and trading increased appreciably. Shortly afterwards stocks of damar became light and higher freight rates from Batavia gave this market a very firm tone without actually increasing prices. About the middle of October the Chinese revolution became a factor in the market as shipments of China wood oil ceased and stocks in this country were very low with arrivals destined to go out on contracts. Under the circumstances there was nothing to do but replace rosins and wood oil by varnish gums and linseed oil and this was done to a very large extent. The cheaper grades of manila were heavily drawn on. Damar, Kauri and Pontinak gums were also in favor and large stocks were taken by varnish manufacturers. Damar was firmly held and recorded and advance of one-half a cent a pound, but the other gums were in ample supply and held steady with a general firm tone to the market. The activity of the market at the close of the year may be estimated when it is considered that in December, 1911, 2,489,931 pounds of gum were imported as compared with 1,184,992 pounds in December, 1910. The imports for the past three years are as follows:—

1911—24463,317 pounds
1910—26,050,794 pounds
1909—29,195,306 pounds.

These figures show that the use of varnish gums is decreasing and it was only the unusual activity of the last three months of the year which prevented 1911 from showing a far greater loss in imports as compared to the two years preceding.

Window Glass.

Some of the largest dealers in window glass agree that the year was the worst in the history of the industry, which is in itself a concise report of the year. At the beginning of the year there was a great deal of confusion regarding discounts, and one rate followed another in rapid succession. Competition was carried to a point beyond reason and prices were reduced lower than ever before. In spite of the demoralized condition of the trade, it was found when the business for the year was counted up that stocks have been well depleted and the volume of business was large enough to have made the year highly satisfactory if the margin of profit had been what it should have been. The demise of the Imperial Window Glass Company is attributed as the main reason for the poor showing of the glass industry. After this company had been legislated out of existence, manufacturers began placing their product on the market direct and hand factories were forced to compete with the machine-made product and so the price cutting began, which was to prove so disastrous to all concerned. During the year there were about 4,000 pots in the hand factories of the country and of these about 2,200 were available for operation and not much more than one-half of these available pots were actually in operation during the year, thus showing to what extent production was curtailed. At the close of the year there was much talk of changing conditions in the trade and a meeting of Eastern jobbers was held to talk the matter over, but no results were apparent before the end of the year. The labor element was another thorn in the side of the manufacturers in 1911, as wages had to be reduced in order to market the output at the prices accepted. Lower wages and interrupted work caused dissatisfaction among the workers and turned many skilled workers to other lines. Regarding discounts, it is useless to quote any set as having been followed since private agreements entered into the majority of sales and sellers offered their goods irrespective of what was quoted as official discounts.

LEGHORN TALC AND UMBER MARKET.

TALC.—The Italian extra-white quality continues being the most preferred one in the United States, and its production during the last twelve months has been about the same as on the previous year. Also the volume of exportation into your country has not changed, although a fair improvement in the demand was generally anticipated when the custom house authorities decided in June last, that this article powdered should pay again the old lower duty of 20 per cent. ad valorem. It may also be interesting to know that quite recently a combine has taken place among the various steamship lines doing the service between Genoa and New York to the principal object of increasing all freight, and also on talc they have decided to require an advance on the previous rate of say 4s. per ton. All previous quotations for goods delivered in New York will therefore have to be increased accordingly, nor any decline is expected to happen in the freight rates during the coming year. Although, as written, there has been no improvement in the demand from the States for the last twelve months, the price of the extra white Italian talc has not suffered any decline, nor is it expected to lower later on, as it is already sufficiently low as compared with what the French and other qualities are being sold at. On the contrary, our miners should increase their price now that the labor expenses are so much higher than before. There is also to consider, on the other hand, that our talc is not selling in the United States only, but also in other countries, particularly of Europe, where its sale is gradually and fairly increasing, so that our producers scarcely ever happen to have any stock left. As regards the lower qualities, they can find but little outlet in the States on account of the competition of the Canadian product.

UMBER EARTH.—Most the quantity exported from here is in the powdered form, raw or burnt. The volume of exportation into your country for the last twelve months has been somewhat larger than in the previous year. Prices are about the same as before, but there is now some tendency upwards on account of the ever increasing cost of labor.

We have nothing more interesting to add, and we hope this information may be sufficient for you. We shall be pleased to receive your extra edition in due course, and three copies of it will do.

In the meantime, we remain, wishing you the compliments of the season.

THE SHELLAC MARKET.

Realizations in the shellac market of 1911 were not of a character to occasion especially favorable comment, and the market on the whole was disappointing, the closing prices for practically all marks being materially below those in effect at the opening. Our first treatment will concern T. N. as the practical mark of commerce affording the basis for the most comprehensive review. The opening range was 18c. in bags and 18½c. in cases. January developments were generally of a depressing character under the effect of sharper competition, and the disposition of primary shippers to sound lower prices with the hope of gauging the actual condition of the market. The London stock of 96,000

cases was a bear factor. At the close of January 15@15½c. prevailed. Early in February a 14c. market was in effect for bags, but offers at this figure were quickly taken and the market was restored after a few days to 15c. With advance of February, Calcutta was in firmer tendency on reports of drought in the sticlac districts as well as plague at Mirzapore, the center of high-grade orange lacs, and shipment offers were of limited extent. On spot 15½@16c. prevailed. March brought a further appreciation to 16@16½c. under the primary influences, 15½c. being reported paid in bags for March-April shipment to this market. As the month advanced competition assumed keener effect, the Calcutta market being more susceptible to shading influences, and there was a reaction on spot to 15½@16c. The downward movement continued in April under the same influences, 14¾@15¼c. being in effect, but before the close of the month Calcutta was under steadier conditions with a hope of stimulating the demand of this country before the entry upon the blocky season, but buying continued light, stocks being seemingly regarded as heavy enough to tide over the entire blocky season of about five months. Bysache crops reports at this time were more or less conflicting, but needed rains in the producing districts tended to dispel some of the early pessimistic forecasts. There was an attempt to maintain 15@15½c. on spot, but early in May competition proved a disturbing feature, so that 14½@15c. was in effect. Early in June the market was on a slightly steadier basis under the Calcutta influence, but this effect proved of short duration. A basis of 14½@15c. prevailed until late in July, when the market fell to 14@14½c. under the primary influence. At this time Calcutta was reported at its lowest level since 1901 on the withholding of operations from this quarter. The receipts of new lac found a poor outlet, and heavy stocks in the leading markets of the world contributed to the depressing forces of the market. In August an attempt to influence a better feeling was made on advices that the bysache crop had proved the finest in recent years and would be more suitable for higher grades of orange than T. N. By this time the London stock had reached the excessive proportion of 100,000 cases and hung like a pall over the general situation. There seemed to be no suggestion of speculative interest in the London market to relieve the depression. By November the spot market had reached the easier position of 13½@14c. under the foreign influence, but by the close of the year 13¾@14¼c. became the prevailing basis as a result of the firmer trend of Calcutta and London markets. One of the noteworthy developments of the year has been the realization of the efforts of leading dealers in this country to establish a higher standard for T. N. in shipments from the primary quarter. After a long period of negotiations, the Calcutta shippers agreed to recognize for this market a 3 per cent. rosin test instead of 5 per cent., as had been the custom during recent years, and any departure from this standard was to be the subject of penalization. A lighter color was also secured for the higher quality goods, making the general standard for this country conform with that of London. Three per cent T. N. for the general market, known as "U. S. S. A." standard, has come on the market only to a limited extent as yet, the first lot having been on November-December shipment. This grade commands a premium of ¼@½c. over the old stuff. A comparison of monthly values during the last four years and of the high and low limits touched during the previous three years is afforded by the following table, the basis being for bags, cases generally commanding a ½c. premium:—

	1908.		1909.		1910.		1911.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan....	26	25	20½	18	15½	15	18	15
Feb....	25	24	18	18	15	14½	15½	14
March..	23	21	16	15½	14½	14¼	16	15½
April ..	23	21	15½	15	14½	14	15½	14¾
May....	25	23	14	14	15½	14	15	14½
June...	29	26	14	14	15¾	15¼	15	14½
July....	29	25½	15½	14	18½	15¾	14	14
Aug....	27	25	17	15¾	18	18	14	14
Sept....	25	25	16	15	18	17½	14	14
Oct....	25	24	15	14¾	19	17	14	14
Nov....	23	22	15¼	14¾	19½	19	14	13½
Dec....	22	20	15¾	15½	18½	18	13¾	13½
Year...	29	20	20½	14	19½	14	18	13½

	High.	Low.		High.	Low.
1906.....	50	42	1903.....	52¾	26½
1905.....	46	42	1902.....	30	24
1904.....	52	42	1901.....	31	14

After T. N. the market for bleached presented the most interesting developments last year. Declines in the bleached marks were proportionately greater than those in T. N., as local competition was stimulated to an unusually keen degree. For commercial bleached the tendency was easier from 21c. to 19c. during January, and from 26c. to 24c. in bone dried. In May the sharpness of local competition resolved itself into an open price war, and for a short time the market was on a basis of 17c. for commercial and 21¾c. for bone dried. These figures were not considered as representing the general market, which soon steadied itself to 18½c. and 21½c., respectively. On the easy course of Calcutta and the continued sharpness of local tactics, the market again fell to 17c. for commercial and 22c. for bone dried in July. With October the local situation was more unsettled, with 15@20c. the nominal figures. In November there was a further cut to 19c. for bone dried, but most of the houses declined to meet the lower figure, maintaining 20c. Commercial was unchanged at 15c.

Values for fine orange marks also suffered depression last year under the influences which characterized the T. N. situation, and emphasizing the sharpness of selling practices in the local trade. D. C. fell from 26c. to 19c., diamond from 24c. to 18c. and V. S. O. from 24c. to 19c. ¼

In other listed varieties of shellac we have occasion to record a lowering tendency of values last year. A. C. garnet opened at 18c. and declined to 15c. by November. Fine orange marks were quoted at 22@23c. at the opening, and fell to 16@17c. at the close. Light orange, which were listed at 21@22c. at the opening, became available at 15@16c. at the close.

Monthly shipments from Calcutta during the last four years are summarized as follows:—

UNITED STATES.

	1911. Cwts.	1910. Cwts.	1909. Cwts.	1908. Cwts.
January ..	8,940	21,500	17,800	9,700
February..	19,500	11,200	13,200	5,000
March	8,860	30,600	19,000	10,000
April	16,100	23,300	22,400	5,700
May	9,200	28,100	16,300	12,400
June	13,700	6,300	26,000	10,900
July	8,700	3,700	15,200	9,600
August ...	4,800	100	9,900	3,800
September.	2,800	4,300	7,400	5,100
October ..	5,800	9,200	29,300	8,200
November.	18,900	12,800	34,500	12,100
December.	19,500	20,600	25,600	27,200
Totals ..	136,500	171,700	236,600	119,700

UNITED KINGDOM.

	1911. Cwts.	1910. Cwts.	1909. Cwts.	1908. Cwts.
January...	5,500	15,100	6,600	10,100
February..	6,200	10,300	5,200	9,900
March ...	8,500	15,000	7,500	8,300
April	5,600	13,500	7,400	6,600
May	9,500	6,300	10,800	8,400
June	6,000	11,400	8,900	7,200
July	16,300	9,500	10,700	16,600
August ...	3,300	14,300	7,700	10,900
September.	6,100	7,900	9,600	6,500
October ...	7,100	10,200	11,800	8,300
November.	6,900	9,800	11,700	7,000
December.	7,800	5,900	16,100	3,300
Totals ..	82,600	128,900	114,000	103,100

CONTINENT.

	1911. Cwts.	1910. Cwts.	1909. Cwts.	1908. Cwts.
January...	6,900	11,500	10,700	13,700
February..	10,000	13,300	12,900	18,900
March ...	10,300	13,400	17,100	9,100
April	8,400	12,900	14,000	11,800
May	15,600	9,900	16,000	9,700
June	6,800	9,900	8,000	9,700
July	7,100	8,900	7,400	7,600
August ...	4,500	12,400	8,000	5,400
September.	8,700	5,700	9,200	7,500
October ...	14,000	6,900	16,100	8,900
November.	16,800	9,400	9,600	10,100
December.	16,600	11,100	16,200	8,600
Totals ..	125,700	125,400	145,800	121,000

From January 1 to December 31 the shipments compare as follows:—

	1911. Cwts.	1910. Cwts.	1909. Cwts.	1908. Cwts.
To U. S..	136,500	171,700	236,600	119,700
To U. K..	82,600	128,900	114,000	103,100
To Cont...	125,700	125,400	145,800	121,000
Totals ..	344,800	426,000	496,400	343,800

Clearances of all descriptions of shellac from Calcutta during recent years follow:—

12 months ending Dec.	United States. cases.	Continent. cases.	United Kingdom. cases.	Totals. cases.
1911.....	90,986	93,709	50,644	235,339
1910.....	118,325	82,806	88,873	290,004
1909.....	154,998	72,383	94,090	321,471
1908.....	78,925	65,235	77,952	222,112
1907.....	84,382	55,728	66,704	206,814
1899-1906*.	58,270	52,581	25,332	136,173

* Eight years' average.

The following statistics show the imports of shellac into this country in 1911, with comparisons of previous years:—

	Orange. pkgs.	Garnet, pkgs.	Button, pkgs.	Stick and refuse, pkgs.	Total, pkgs.
1911...	87,180	3,040	1,087	8,488	99,795
1910...	130,963	4,405	2,796	11,178	149,342
1909...	133,783	3,891	3,617	5,336	146,627
1908...	67,843	3,219	1,578	9,016	77,656
1907...	85,000	3,181	6,604	10,241	105,086

LONDON SHELLAC MARKET.

Bowed down by the heavy weight of accumulated stocks the London shellac market more or less consistently declined, the loss in value on fair free T. N. in the twelve months being 14s. per cwt. This and the comparison with previous years is shown in the following:—

	Open. s.	d.	Close. s.	d.	High. s.	d.	Low. s.	d.
1911.....	77	0	63	0	78	0	62	0
1910.....	69	0	71	0	88	0	65	0
1909.....	82	0	69	6	82	0	64	6
1908.....	125	0	85	0	140	0	82	6

The shipments from Calcutta were smaller in total, the quantity received by the United Kingdom being also less than in the previous year. The figures are:—

To—	1911. cwts.	1910. cwts.	1909. cwts.	1908. cwts.
U. Kingdom...	82,600	128,900	114,000	103,100
Continent	125,700	125,400	145,800	121,000
United States..	136,500	171,700	236,600	119,700
Totals	344,800	426,000	496,400	343,800

The quantity delivered from warehouses was, however, below that received, and consequently the stocks at the end of the year showed an increase. Thus:—

LANDED.

	1911.	1910.	1909.
Orange .....cs.	38,456	68,784	48,316
Garnet	3,956	4,468	4,802
Button	5,951	9,963	9,761
Totals, cs.....	48,363	83,215	62,879

DELIVERED.

	1911.	1910.	1909.
Orange .....cs.	33,870	28,982	40,225
Garnet	3,472	4,620	4,908
Button	6,870	9,523	9,620
Totals, cs.....	44,212	43,125	54,753

STOCKS AT END OF YEAR.

	1911.	1910.	1909.
Orange .....cs.	93,491	88,905	49,301
Garnet	2,909	2,425	2,377
Button	4,088	5,007	4,577
Totals, cs.....	100, 88	96,337	56,247

The gradual building up of these heavier stocks naturally exerted a downward influence on values as revealed in the following record of weekly closing prices for fair free T. N. on spot. The nearest corresponding dates in the three preceding years being added for comparison:—

FAIR FREE T. N. SPOT.

	1911. s.	d.	1910. s.	d.	1909. s.	d.	1908. s.	d.
Jan. 1....	77	0	69	0	82	0	125	0
Jan. 7....	78	0	68	0	80	0	122	0
Jan. 14....	76	0	68	0	77	0	122	0
Jan. 21....	76	0	68	0	77	0	120	0
Jan. 28....	75	0	68	0	75	0	115	0
Feb. 4....	72	0	68	0	74	0	112	6
Feb. 11....	71	0	65	0	74	0	112	6
Feb. 18....	71	0	66	0	74	0	110	0
Feb. 25....	71	0	68	0	71	0	110	0
Mar. 4....	73	0	67	0	71	0	107	6
Mar. 11....	73	0	67	0	70	0	105	0
Mar. 18....	74	0	68	0	72	0	102	6
Mar. 25....	74	0	68	0	71	0	100	0
April 1....	72	0	71	0	71	0	97	6
April 8....	72	0	71	0	70	0	95	0
April 14....	72	0	65	0	70	0	95	0
April 22....	72	0	65	0	69	0	95	0
April 29....	72	0	65	0	67	0	97	6
May 6....	70	0	67	0	64	0	100	0
May 13....	71	0	68	0	67	0	107	6
May 20....	71	0	70	0	65	0	111	0
May 27....	71	0	73	0	67	0	112	6
June 3....	71	0	72	0	66	0	116	0
June 10....	70	0	72	0	66	0	126	0
June 17....	68	0	72	0	66	0	133	0
June 24....	68	0	73	0	66	0	140	0
July 1....	69	0	74	0	67	0	140	0
July 8....	69	0	77	0	68	0	137	0
July 15....	69	0	81	0	68	0	132	0
July 22....	67	0	87	0	68	0	125	0
July 29....	65	0	88	0	70	0	119	0
Aug. 5....	63	0	86	0	73	0	120	0
Aug. 12....	63	0	87	0	75	0	115	0
Aug. 19....	63	0	87	0	74	0	111	0
Aug. 26....	62	0	86	0	74	0	108	0
Sept. 2....	62	0	84	0	74	0	106	0
Sept. 9....	64	0	83	0	72	0	106	0
Sept. 16....	64	0	83	0	72	0	106	0
Sept. 23....	66	0	82	0	69	0	97	6
Sept. 30....	66	0	81	0	69	0	97	6
Oct. 7....	66	0	85	0	67	0	95	0
Oct. 14....	65	0	84	0	66	0	92	6
Oct. 21....	66	0	85	0	67	0	94	0
Oct. 28....	66	0	87	0	65	0	95	0
Nov. 5....	65	0	85	0	64	0	94	0
Nov. 11....	65	0	85	0	67	0	94	0
Nov. 18....	64	0	85	0	67	0	93	0
Nov. 25....	64	0	82	0	67	0	92	0
Dec. 2....	63	0	82	0	69	0	90	0
Dec. 9....	63	0	80	0	68	0	82	6
Dec. 16....	63	0	80	0	68	0	83	0
Dec. 22....	63	0	77	0	68	0	83	0
Dec. 30....	63	0	77	0	69	0	83	0

Monthly quotations for futures over the last two years show:—

1911. s.	d.		1910. s.	d.	
Jan. 1...	77	6 March	Jan. 1...	70	0 March
Feb. 4...	71	6 March	Feb. 5...	69	0 March
Mar. 4...	74	0 May	Mar. 5...	70	0 May
April 1...	72	0 May	April 3...	70	0 May
May 6...	72	6 Aug.	May 7...	70	0 Aug.
June 3...	73	0 Aug.	June 1...	75	0 Aug.
July 1...	69	0	July 2...	77	0 Aug.
Aug. 5...	62	6	Aug. 6...	88	0 Oct.
Sept. 2...	63	0 Oct.	Sept. 3...	86	0 Dec.
Oct. 1...	69	0 Dec.	Oct. 1...	83	0 Dec.
			Nov. 5...	86	0 Dec.
Dec. 2...	64	6 March	Dec. 3...	84	0 March
Dec. 30...	64	6 March	Dec. 31...	77	6 March

CALCUTTA SHELLAC MARKET.

The year opened with T. N. at Rs. 38, but thereafter the market gradually fell away until the end of February when we again saw a rise to the same figure. This level, however was not maintained, and during the succeeding months, prices decreased until the middle of August when business was done at Rs. 30. The end of September saw the price up to Rs. 33, but the market then again declined to Rs. 31.8, at which rate we remained fairly steady for the closing months.

Throughout the year supplies of stick lac were strongly held and came forward slowly, and as a consequence manufacturers were able to work with only a small margin of profit.

The London stocks, which have stood at about 100,000 cases, have had a depressing effect on business and tended to keep values down, and taking the volume of shipments into account, there seems little prospect of an appreciable rise in prices for some considerable time to come.

Owing to the meagre margin of profit many factories shut down, while others worked at much less than their full capacity. Available stocks in Calcutta were accordingly greatly reduced during the latter portion of the year, and this helped to keep the market fairly steady, but with few buying orders coming from the home markets, the position was not in any way assisted.

The following are comparative figures of actual clearances of shellac from Calcutta for the past four years:—

	Orange, cases.	Garnet, cases.	Button lac. cases.	Total cases.
1911....	207,504	15,274	12,561	235,339
1910....	251,751	18,972	19,281	290,004
1909....	284,371	17,282	19,818	321,471
1908....	187,057	18,504	16,551	222,112

CHINA WOOD OIL.

China wood oil opened the year with prices considered high, quotations being 7¾@8c. for spot and shipments. Trading was light and but little interest was shown in the market. At the beginning of February reports of higher prices in the primary market reached here and influenced some buyers to place orders for future delivery. The majority of consumers considered the asking price as too high and deferred placing orders, expecting to gain better quotations. In March the spot market was moved up to 8@8¼c., with stocks in hands of importers and consumers small and shipments for the month of February totaling only 3,500 barrels. The situation did not improve any during March, as arrivals were destined to go out on contracts. Scarcity of stocks drove the price up to 8¼@8½c. in May and still shipments were light as consumers had persistently refused to place orders at the prices quoted and were holding out for lower prices, while conditions in the primary market did not enable sellers to make reductions. In June 8½c. was firmly held for spot goods and June shipments amounted to but $7,500 barrels, as against 11,488 in the same month in 1910. The first half of the year closed with approximately 40,000 barrels of wood oil shipped to this country, which was a very poor showing in view of the high price of linseed oil and the expanding use of wood oil in varnish making. The latter half of the year was by far the most eventful in the China wood oil market. July and August were practically repetitions of June, but in September prices were advanced to 8¾c. in sympathy with nigner values at producing centers, and shipments for September fell off to 5,655 barrels, as compared to 9,563 barrels in 1910. With October the revolution in China entered as a factor and immediately prices for spot goods advanced to 8¾@9c. and later in the month, when it became known that shipments from Hankow had been suspended, 9½c. and even 10c. was held for spot supplies. From then until the end of the year the question resolved itself into speculation regarding the time when shipments from Hankow would be continued, but the year closed with no solution to the problem and with no supplies in sight. Shipments were made regularly up to and including October 10 and as it takes about three months to lay down the oil in the local port arrivals were regular up to the end of the year, but all shipments were for contract orders, and the spot supply remained practically bare and the situation was rendered more acute by the knowledge that a part of 1912 would see no new arrivals. Prices were variously quoted at from 11c. to 14c., as to seller, and in some cases this distinction meant a quality range. A small lot of adulterated oil reached the local market and made buyers wary of their purchases. Unofficial figures place the shipments of wood oil to this country at 81,000 barrels in 1911, as compared with 86,000 barrels in 1910.

Disregard the sales of second hands the upward trend of spot prices throughout the year are clearly shown by the following table.

SPOT PRICES FOR CHINA WOOD OIL IN 1911.

January	7¾@ 8
February	7¾@ 8
March	8 @ 8¼
April	8 @ 8¼
May	8¼@ 8½
June	8½@—
July	8½@—
August	8½@—
September	8¾@—
October	9½@—
November	11½@13
December	11 @14

NEW YORK FERTILIZER MARKET.

From a very promising beginning the year wound up in a very demoralized condition for the general fertilizer trade. The record cotton crop was the factor which disturbed the progress of the market. With more than 15,000,000 bales, the largest on record, the Southern planters have not realized as much for their product, and are planning to restrict production in 1912. The lower price at which cotton was selling kept large stocks in the hands of planters, and there was not the readiness to dispose of holdings as was noted in previous years. This spelled slow collections and deferred payments for fertilizer manufacturers, and was another reason for a poor outlook for the fertilizer trade. The quantity of cottonseed meal which would be available as fertilizer as a result of the record cotton crop also helped in the general demoralization.

At the beginning of the year conditions were favorable and trading was fairly promising and of good proportions, as despite the general lethargy of the fall and winter months, marked increases are noted in the consumption of nearly every kind of fertilizing materials. Sulphate of ammonia was used to a greater extent with increased domestic production, more than making up the deficiency shown in the imports of foreign sulphate. Nitrate of soda was imported in larger quantities than ever before. The menhaden fishing season was the best on record, and the

consequent supply of fish scrap was larger than ever. Pyrites broke all import figures, and acid phosphate must therefore have been consumed in greater quantity. Phosphate rock was imported in larger volume and domestic consumption was of an increasing order. Potash salts of every kind showed large gains over preceding years, so that it will be seen that consumption of fertilizers in 1911 was better than ever before. The report becomes pessimistic only when the close of the year is considered, and conditions then surely are not favorable for continued expansion in 1912. Moreover, 1911 found a comparative scarcity in blood, tankage and bones, and in these particular lines trading was not satisfactory.

An important feature of the year was the settlement of the long continued dispute over potash contracts made by American buyers and independent mine owners in Germany. While the terms of settlement were not entirely satisfactory and left the German syndicate in full control of the potash supply. Prices of nitrate of soda and sulphate of ammonia have climbed during the year, and pyrites have recorded a gain. Dried blood and tankage have been weak, and have gone down in price.

The general growth of the fertilizer trade in recent years is indicated by the facts set forth in the preliminary statement of the thirteenth census, which was published at the close of the year. This statement covers the year 1909, and shows that there were 550 establishments engaged in the manufacture of fertilizers in 1909, as against 400 establishments in 1904.

The quantity of all kinds of fertilizers manufactured in 1909 was 5,240,-164 tons, a gain of 1,972,387 tons, or 60 per cent., over the 3,267,777 tons made in 1904. At both censuses the largest part of this consisted of complete fertilizers, of which 2,717,797 tons were produced in 1909 and 1,329,149 in 1904, a gain of 104 per cent. The proportion of the total in 1909 was 52 per cent; in 1904, 41 per cent.

Superphosphates numbered 1,201,354 tons in 1909 and 766,338 in 1904, an increase of 57 per cent. Concentrated phosphate was not reported separately in 1904; the production in 1909 was 313,-888 tons.

In 1909, 292 establishments engaged primarily in the manufacture of other products reported fertilizers as a by-product, making the aggregate production of 5,616,335 tons. Complete fertilizers are thereby increased to 2,947,-642 tons; ammoniated fertilizers to 520,-777 tons; concentrated phosphate to 324,843 tons; superphosphate to 1,223,969, and other fertilizers to 599,104 tons.

Sulphate of Ammonia.

According to statistics for the year 1911, the use of sulphate of ammonia in the United States continues to expand. The government figures of imports show that approximately 94,633 short tons were brought into this country during the year, as compared with 92,343 short tons in 1910. The production of domestic sulphate of ammonia has increased and unofficial figures place the 1911 production at approximately 130,000 tons, as compared with 116,000 tons in 1910. Hence the available supply for 1911 shows a gain of more than 16,000 tons over that of 1910.

The domestic supply has been well sold up throughout the year and offerings at all times have been light so that for the majority of the time manufacturers were able to do nothing more than supply their contract orders, with nothing to offer in the way of spot supply. Prices have covered considerable range during the year, opening at $2.90@2.95 for foreign prompt, and $2.87½@2.90 for shipments. The market was firm owing to the fact that the Continental markets and the English consumers were taking the bulk of the offerings, leaving smaller stocks for this country. Firmness in the English market caused an advance in the local market in January to $2.95@3 for spot, and $2.87½@2.97½ for shipments. Domestic offerings at this time were small and were quoted $2.95@3.05 for prompt, and $2.90@2.92½ for shipments. Prices continued to harden and at the beginning of February $3@3.05 was held for foreign prompt, and $2.92½@2.97½ for shipments. Domestic was quoted at $3.07½, but scarcely anything was offered. The middle of February brought another advance and foreign and domestic were held at $3.10@3.15 and $2.95@3.10 for shipments. These figures were maintained until the middle of March, when $3.25 was asked for prompt stocks, but a sharp decline was registered early in April when the local demand grew less and the English market was released from the pressure of heavy demand from English consumers and Continental buyers. The downward trend then brought prices down to $3.02½@3.05 for all selections later in April and with a slow market in May new low levels were set early in June with $2.97½@3 quoted and two weeks later $2.92½@2.95 was obtainable. Then prices began to climb, the last week of June saw a 5 point increase, followed July 1 by another gain, so that prices were then given as $3.02½ @3.05. The market continued to harden throughout July and the month closed with $3.07½@3.10 as the ruling quotation. Price gains also were made in August, $3.10@3.12½ opening the month and $3.17½@3.20 bringing it to a close. In September $3.15 was held steadily, with a range at times to $3.20 for smaller lots, and in October $3.20 was the firm market price and this figure was held for the remainder of the year with the general tone of the market firm and some sellers holding out for $3.25.

In Great Britian production of sulphate for 1911 is placed at 378,500 long tons and of this amount almost 292,000 tons were exported and 85,000 tons delivered to home consumers, thus leaving approximately 13,000 tons on hand at the close of the year. The United States lost its position at the head of importers, having been supplanted by Japan. The amounts imported by the various countries were as follows:—

SHIPMENTS FROM GREAT BRITAIN.

	1911. Tons	1910. Tons.
United States	65,920	76,111
Japan	76,095	65,920
Spain and Portugal	56,501	50,241
Java	28,168	32,362
Italy	10,162	10,202
British Guiana	7,808	7,532
France	7,239	8,437
Canaries	7,131	6,673
Mauritius	5,966	6,009
West Indies	5,820	5,271
Holland	3,352	3,415
Germany	2,749	7,070
Belgium	125	438
Other countries	14,856	12,651
Totals	291,883	283,772

Nitrate of Soda.

During the month of December 59,591 tons of nitrate of soda were imported into the United States. This is the largest amount of nitrate ever brought into this country in a single month and as a result the total imports for the year were brought up to the high total of 544,878 tons, as compared with 529,-172 tons in 1910 and 428,429 tons in 1909. At the beginning of the year it was freely predicted that the United States would consume quantities of nitrate far greater than ever before, in fact, it was asserted that there might be a shortage of supplies owing to the heavy demands which would be made by this country. The demand, however, has fallen far short of expectations and the slow position of the fertilizer trade during the last four or five months of the year does not auger well for heavy consumption in the early part of 1912.

The production of nitrate of soda is estimated at nearly 54,000 tons in excess of 1910 and the situation in Chile has not changed materially. A few new works started up during the year, but the lack of caliche or raw material caused several oficinas to close. Reports arose, particularly toward the close of the year to the effect that the labor problem was entering into the matter of production and that scarcity of competent help might cut down the output in 1912, but these reports are generally discredited and there seems to be no cause for disturbance to the market from that quarter.

In the local market the year opened slow with the fertilizer trade well stocked up; $2.12½ was quoted for all positions. Large stocks at Southern ports brought an easier tone to the market, and towards the close of January $2.10 was freely quoted, with many sales of second hands at $2.05. While it was difficult to maintain quotations with large sales of second hands, being made at lower prices, no change was quoted by dealers throughout February and March, and in May the local price went to $2.12½. The market then grew firm, and in the middle of June $2.12½ @2.17½ was quoted by sellers, and a week later $2.15 was the lowest figure obtainable. About the middle of July $2.17@2.20 became the regular quotation price, and early in August prices again hardened, so that $2.20 was firmly held. A month later another advance was recorded, and $2.22½ was quoted. This price was well maintained until late in October, when the top figures of the year were reached. $2.25@2.27½, but the situation eased off in November, and $2.22½@2.25 was quoted, and continued until the close of the year. From the above it will be noted that the market was on an ascending scale throughout the year. The lowest price of the year was in January and held for the two months following, but after that the market made gradual gains in price until the highest price of $2.25@2.27½ was reached in November.

The following English figures give a synopsis of the year from the standpoint of production and deliveries, together with the figures for 1910:—

	1911. Tons.	1910. Tons.	Increase. Tons.
Production	2,490,121	2,436,182	53,939
Shipments to—			
Europe, including Egypt	1,827,087	1,661,763	165,324
United States	518,613	564,997	*46,384
Other destinations.	74,000	81,230	*7,230
Total shipments	2,419,700	2,307,990	111,710
Deliveries in—			
Europe, including Egypt	1,702,450	1,666,170	36,280
United States	537,000	503,600	33,400
Other countries	74,000	81,230	*7,230
Total deliveries	2,313,450	2,251,000	62,450
Stocks Dec. 31 in—			
Chili	475,300	450,700	24,600
Europe	479,170	297,020	182,150
Afloat for Europe Dec. 31	583,610	667,280	*83,670
Visible supply, Europe, Dec. 31	1,662,780	964,300	98,480

* Decrease.

Fish Scrap.

While there are no official figures to establish the amount of fish scrap which entered into the fertilizer trade during the season, yet it is possible to get a fairly accurate line on the situation by a study of the menhaden oil season. The amount of fish scrap varies with the yield of oil and the past year was a record breaker for menhaden oil. More and better equipped boats and a larger number of men engaged in the fishing industry, and the yield of oil was in the neighborhood of 115,000 barrels, as compared with 72,000 barrels in 1910. It is safe to assume that the production of fish scrap experienced a proportionate increase, and as there was scarcely any stocks on hand at the close of the year, it is apparent that the demand kept pace with the larger production.

At the beginning of 1911 there was no domestic scrap on hand, and only a limited supply of foreign ground fish guano. The latter was quoted at $3.65 and 10, but as the supply became lighter quotations advanced later in the month to $3.70@3.75 and 10. There was no life to the market and only odd lots were traded in until April, when $3.60@3.70 and 10 was offered on a basis of Southern transactions. Resales at cut prices brought quotations down to $3.40@3.50 and 10. Towards the end of April dealers were quoting prices for contracts with the "if made" clause, and $3@3.05 was the asking price. There was but little business passing, however, and right through May there seemed to be a wide divergence of prices quoted, the range being from $2.50 to $3.10, for dried scrap, and from $2.15 to $2.45 for wet acidulated. With the prospect of fresh domestic stocks, foreign ground fish guano receded to $3.40 and 10. Late in May the Chesapeake Bay works established the price of $3.50 and 10, f. o. b. factory, and considerable business was done at this figure. In June the price advanced to $3.25 and 10, with imported fish guano at $3.50@3.60. Under the influence of heavy stocks the market declined in July, and $3.15 and 10 was the asking price for dried scrap and $2.82½@2.95 for wet acidulated. Dried scrap then declined to $3.10 and 10, but quickly recovered and closed the month at $3.20@ 3.25 and 10. This price was generally held for the balance of the year, although certain sellers held out for $3.25 and 10. Wet acidulated fluctuated in price from $2.70@2.80 and 35 in the middle of September to $2.50 and 35, and then as the supply began to diminish and the fishing season to close prices again stiffened and $2.70@2.72½ and 35 was quoted.

Phosphate Rock.

Production of phosphate rock for 1911 shows a decided gain over that of 1910. The demand has likewise expanded, and with greater request from abroad the supply is well taken care of. According to government statistics exports in 1911 amounted to 1,246,577 tons, compared to 1,083,037 tons in 1910, and 1,020,556 tons in 1909. The countries to which phosphate rock was exported, together with the amounts in tons to each country, are as follows:—

United Kingdom	171,589
Belgium	103,383
France	133,206
Germany	309,451
Italy	106,780
Netherlands	156,015
Other Europe	148,910
Canada	26,236
West Indies and Bermuda	26,127
Japan	114,474
Other countries	3,307

Florida shipments, as far as available statistics will allow, are indicated by the following:—

	1911.	1910.	1909.
Hard rock	449,798	478,820	461,353
Land pebble	1,762,157	1,093,190	898,964

At the beginning of the year prices were quoted as follows:—South Carolina, kiln dried, $3.50@3.75; Florida, 68 per cent., $3.75@4; Florida, 77 per cent., $5.50@6; Tennessee, 70@80 per cent., $5@ 5.50; Tennessee, 75 per cent., guaranteed, $4.75@5; Tennessee, 68@72 per cent., $4.25 @4.50. These prices were unchanged until July, when Florida, 68 per cent., was changed to $3.60@3.75, and Florida, 77 per cent., to $5.75@6.25, and with these quotations the market continued steady throughout the year.

In Tennessee many improvements were noted. Plants were enlarged and some new workers were established, so that the output from that quarter was materially increased.

Potash Salts.

By far the most important development of the year in potash salts was the settlement of the much-mooted "potash controversy." It was not until the year was closing that this was brought about, but a compromise at last was reached, the old contracts were relinquished by the American holders and new contracts entered into with the German syndicate, now more strongly intrenched than ever. The individual contract holders made separate terms of settlement but in general it may be stated that American buyers gained nothing from their so-called low-priced contracts and as the matter ended the German monopoly was strongly maintained. Another important development of the year has been the persistent efforts made to discover native supplies of potash. Reports of potash in mineral deposits in various parts of the country have been made and great importance has been placed by the government on the possibility of obtaining potash from the kelp groves on the Western coast. Whether commercial advantage can be taken of home supplies of potash, however, is a question for the future to answer.

The imports into this country show a constantly increasing consumption, all varieties of salts participating in the increase, as is shown by the government figures of export which are as follows:—

IMPORTS OF POTASH.

	1911.	1910.	1909.
Muriate	lbs.509,254,846	381,873,875	298,854,649
Sulphate	121,039,192	86,162,874	70,161,872
Kainit and manure salt*	737,852	377,778	.....

* Not given separately prior to 1910, and figures for 1910 and 1911 are from July 1.

Prices during the year were stable at the schedule issued by the syndicate, but at the beginning of July when the negotiations at Berlin for settling the "controversy" were seen to have failed, the syndicate issued a new schedule which was as follows:—Bag Salt.—Muriate of potash, 80@85 per cent., basis 80 per cent., $38.55; muriate of potash, min. 95 per cent., basis 80 per cent., $40.15; muriate of potash, min. 98 per cent., basis 80 per cent., $41; sulphate of potash, 90@95 per cent., basis 90 per cent., $46.80; sulphate of potash, min. 96 per cent., basis 90 per cent., $47.35; double manure salt, 48@52 per cent., basis 48 per cent., $24.95 per ton of 2,000 pounds net. In bags of 200 pounds net weight. Bulk Salt.—Manure salt, min. 20 per cent., actual potash, $13.50; hard salt, min. 16 per cent. actual potash $10.85; kanit, min. 12.4 per cent. actual potash, $8.45 per ton of 2,000 pounds net.

While this schedule remained nominally in effect for some months, contract business was taken at the old schedule of prices and scarcely any business was done at the new prices, so that it may be said that the business of the year which was handled by the syndicate was all done at the old schedule which is as follows:—

Bag Salt.—Muriate of potash, 80@85 per cent., basis 80 per cent., $38.05; muriate of potash, min. 95 per cent. basis 80 per cent., $39.65; muriate of potash, min. 98 per cent., basis 80 per cent., $40.50; sulphate of potash, 90@95 per cent., basis 90 per cent., $46.30; sulphate of potash, min. 96 per cent., basis 90 per cent., $46.85; double manure salt, 48 to 53 per cent., basis 49 per cent., 24.45 per ton of 2,000 pounds net, in bags of 200 pounds net weight. Bulk Salt.—Manure salt, min. 20 per cent. actual potash, $13.30; hard salt, min. 16 per cent. actual potash, $10.65; kainit, min. 12.4 per cent. actual potash, $8.25 per ton of 2,000 pounds net. Cost, freight and insurance to Boston, New York, Philadelphia, Baltimore, Newport News, New Orleans, Galveston; also cost, freight and insurance to Norfolk, Wilmington (N. C.), Charleston, Savannah, Fernandina, Mobile, Pensacola, subject to being able to arrange full cargoes. Shipments from Germany during open river navigation in lots of at least 50 tons bag salt or 200 tons bulk salt, as can be arranged by the syndicate, payment in New York funds, net without discount in exchange for documents (upon their arrival in New York, German weight and analyses. Each contract subject to confirmation.

In connection with the subject of prices it is interesting to note that when the American interests relinquished their low-priced contracts, they made new contracts with the syndicate providing for their full requirements, these contracts to cover a period of five years, and the price for muriate of potash was $32.50 per ton instead of $37.50, the old syndicate price. The price of other potash salts as covered in these new contracts is in proportion to that charged for muriate. Advices from Germany state the business of 1911 showed a gain in value of about $6,250,000 as compared with 1910. The value of the output was about $40,750,-000, which includes the sales of the Sollstedt and Aschersleben works, amounting to $3,750,000.

BALTIMORE FERTILIZER MARKET REVIEW.

Baltimore, February 5, 1912.

Now that the results of the last year in the fertilizer trade here have been ascertained, accounts having been closed and balances drawn, it is seen that the members of the trade have less cause for dissatisfaction with what was accomplished than might have been supposed from the disappointment expressed at different times, when it became apparent that the high expectations entertained might not be realized. These expectations were not unnaturally based upon the extraordinary gains made in 1910. Such great strides had been made that the manufacturers found themselves almost insensibly yielding to the comforting reflection that the expansion was quite normal and that a repetition of the increase might be looked for in 1911. But the spring of 1911, as will be remembered, proved to be unusually wet. Many farmers lost all of their first seeding, the seed rotting in the ground on account of the heavy rains, while the temperament remained abnormally low. When the rains ceased it was almost too late to reseed with the earlier crops, and the opportunity for a heavy distribution of fertilizers in the spring was lost. Later on, the later crops suffered heavy damage in consequence of a prolonged drouth and the fertilizer trade failed to get the benefit of an active business at that period of the year, the lessened receipts for products also reducing the ability of the farmers to buy fertilizers.

These several causes combined naturally encouraged the belief, to which the intensified competition, the latter being in turn the direct result of increased production, had given rise that the movement, if not actually going backward, had failed to make ordinary gains, and that an unhealthy state of affairs prevailed. Individual members of the trade can hardly be blamed if they yielded to this impression, but an analysis of conditions at the end of the year fails to show that the belief has any real foundation in fact. All the ascertainable data tend to confirm the assumption that notwithstanding the appearance of quiet during a considerable part of the year, 1911 developed an entirely normal, though not perhaps extraordinary increase in business. The effects of the additions made to the productive agencies in the past eighteen months, however, were more acutely felt than they had been before, and this made it appear as though the activity in the demand had abated, when it meant nothing more than that the trade was being divided up between a larger number of manufacturers.

There are some eighteen factories for the production of mixed goods in this city, and their estimated output last year amounted to about 750,000 tons—at least that is their capacity—and it is not thought that any of them fell far below the limits of the plants. As far as can be learned, practically all of this material was distributed, few manufacturers carrying over considerable stocks, which of itself would show the absorptive ability of the market and afford substantial ground for encouragement.

Baltimore manufacturers calculate that there is a normal increase in the sale of fertilizers of 12 to 15 per cent. every year, so that putting the increase in the production which has taken place in the last year and a half at not less than 200,000 tons, or 30 per cent., only two years would be required to take up the additions made and leave the situation as it was before the new factories came into the field. The future, therefore, seems wholly devoid of indications that might cause uneasiness, and the manufacturers have every reason to regard the present year with confidence.

For obvious reasons it is impossible to ascertain the exact production of the Baltimore factories in 1911, but an indirect way is available, this being through the custom house statistics, which show the quantities of raw materials brought into the port of Baltimore and admit of comparisons with former years. Of course, all of the fertilizer materials imported were not taken up by the local manufacturers, but the quantity which went to interior points is relatively small, and in any event it is a reasonable assumption that the shipments away from Baltimore last year were no greater than those for the previous twelve months, so that a fair basis of comparison is still at hand. The totals for the two years are as follows:—

Material.	1911 Pounds.	1911 Value.
Carbonate of potash	4,975,513	$153,787
Muriate of potash	113,229,505	1,748,338
Sulphate of potash	14,993,605	296,008
Manure salt	93,858,240	418,529
Kainit	123,634,560	297,223
Guano	6,818,566	55,259
Bone dust, etc	12,676,320	122,656
Nitrate of soda	183,270,080	2,064,701
Sulphate of ammonia	23,928,532	609,126
All others	.....	243,068
Totals	**578,384,915**	**$6,228,242**

Material.	1910 Pounds.	1910 Value.
Carbonate of potash	4,992,732	$164,741
Muriate of potash	96,197,602	1,258,034
Sulphate of potash	10,974,960	183,584
Manure salt	81,892,160	243,068
Kainit	202,267,200	373,710
Guano	11,941,440	94,150
Bone dust, etc	28,022,400	288,369
Nitrate of soda	150,268,160	1,684,813
Sulphate of ammonia	27,069,886	670,145
All others	.....	800,233
Totals	631,626,440	$5,760,767

Owing to a change in the method of classification at the custom house it is not possible to give the imports of all substances for the various months, and only the aggregates for the two years are available. For instance, up to July of last year there was no separate column for bone dust and bone ash. Until that time kainit was included in another classification, being apparently figured in "all others." With respect to manure salt, no separate column was kept until July of 1910, and comparisons by months for the first six months of the year cannot be made. An analysis of the figures shows that the imports of muriate of potash increased last year over 1910, which also applies to nitrate of soda, sulphate of potash and manure salt. A heavy decline, however, is shown in the lowest grade of potash kainit, of which a total of 123,634,560 pounds was brought in during 1910, as against not less than 220,267,200 pounds in 1910. This explains why, though the total imports of all raw fertilizer materials amounted last year to only 578,384,915 pounds, not including "all others," their value was $6,228,242, while the 631,626 pounds imported in 1910 were valued at not more than $5,760,767. In a general way, it may be said that the imports were smaller, but that the materials imported were of a higher grade, so that in reality the imports of fertilizers may be considered as having increased.

Another striking feature of the custom house statistics is to be found in the fact that the imports during the first six months of last year were far heavier than those in the second half, the difference with respect to some materials being nearly a half. Evidently, the excellent business done in 1910 by the factories encouraged them to place large orders for potash and nitrate of soda, the subsequent curtailment in the demand, when the effect of the prolonged wet weather and the drought that followed had made themselves felt, apparently prompting the factories to hold back with orders. The potash war, however, may also have had something to do with the matter. There was a marked falling off in the importations of bone dust and bone ash, as well as in guano, the tendency being seemingly toward the use of other materials. Some of the important materials used in the manufacture of fertilizers are not represented in the schedule for the reason that they have been lumped with others under a general head. Among these materials are pyrites, the latter being used in the manufacture of sulphuric acid, which is almost entirely consumed by fertilizer factories. The items with respect to which detailed figures for the several months were to be obtained, are as follows:—

CARBONATE OF POTASH

	1911 Pounds.	1911 Value.	1910 Pounds.	1910 Value.
Jan.	458,411	$14,647	431,665	$14,670
Feb.	901,217	30,084	358,759	12,107
March.	260,448	8,423	259,730	8,133
April.	551,076	17,292	543,353	17,323
May.	819,279	17,169	384,842	12,087
June.	208,536	7,698	305,350	10,234
July.	434,837	13,411	262,960	8,180
Aug.	467,695	13,279	453,945	15,316
Sept.	82,401	2,647	343,968	11,055
Oct.	204,941	6,715	604,876	20,948
Nov.	467,518	15,260	377,021	12,852
Dec.	179,154	5,772	662,604	21,856
Totals	4,975,513	$153,789	4,992,732	$164,741

MURIATE OF POTASH.

	1911 Pounds.	1911 Value.	1910 Pounds.	1910 Value.
Jan.	10,351,935	$169,352	8,843,552	$126,759
Feb.	12,011,445	189,226	7,906,894	98,759
March.	18,832,180	293,092	12,722,266	147,445
April.	12,216,339	194,753	2,331,429	23,914
May.	6,751,759	102,060	10,870,968	138,576
June.	6,997,450	116,651	4,590,481	57,874
July.	11,875,000	181,860	11,931,705	172,926
Aug.	3,087,227	51,667	21,257,631	303,748
Sept.	9,661,692	125,349	6,423,098	86,555
Oct.	8,784,059	135,571	5,202,013	54,834
Nov.	5,291,762	78,284	3,579,651	39,983
Dec.	7,368,657	100,541	447,974	6,661
Totals	113,229,505	$1,748,328	96,197,602	$1,258,034

SULPHATE OF POTASH.

	1911 Pounds.	1911 Value.	1910 Pounds.	1910 Value.
Jan.	1,695,622	$33,212	1,230,631	$21,669
Feb.	2,881,459	56,522	2,305,976	36,440
March.	3,135,182	66,096	444,447	5,499
April.	594,564	11,832	....	....
May.	895,956	21,336	1,244,958	17,406
June.	717,031	14,314	503,971	8,025
July.	1,314,805	24,662	1,382,466	23,696
Aug.	719,963	14,934	1,525,266	27,277
Sept.	1,108,738	18,758	766,037	14,968
Oct.	1,131,492	27,251	3,008,939	19,138
Nov.	343,994	5,627	502,275	9,386
Dec.	454,196	7,470	....	....
Totals	14,993,605	$296,008	10,974,960	$183,504

GUANO.

	1911 Tons of 2,240 lbs.	1911 Value.	1910 Tons of 2,240 lbs.	1910 Value.
Jan.	..	....	50	$1,420
Feb.	825	5,804	41	1,168
March.	30	1,085	1,327	14,901
April.	587	27,350	415	13,136
May.	....	....	193	6,308
June.	....	....	978	19,937
July.	....	....	57	1,874
Aug.	1,001	5,310	422	9,254
Sept.	....	....	863	6,499
Oct.	....	....	100	2,132
Nov.	....	....	885	17,523
Dec.	601	5,701	50	1,734
Totals.	3,044	$55,259	5,331	$94,150

NITRATE OF SODA.

	1911 Tons of 2,240 lbs.	1911 Value.	1910 Tons of 2,240 lbs.	1910 Value.
Jan.	10,906	$279,766	6,382	$130,171
Feb.	6,580	152,201	3,754	134,148
March.	4,981	114,828	6,249	224,015
April.	4,182	90,624	....	....
May.	6,179	142,803	2,809	54,710
June.	5,425	122,556	9,659	221,030
July.	8,580	186,689	6,986	134,706
Aug.	6,557	210,374	12,462	280,211
Sept.	7,247	170,789	....	....
Oct.	9,507	272,641	8,534	225,201
Nov.	....	....	7,229	170,118
Dec.	11,273	321,430	3,020	110,503
Totals.	81,817	$2,064,701	67,084	$1,684,813

It is not advisable to include "all others" for the reason that various items were taken out in course of time and carried as separate classifications.

There are eighteen factories in operation in and around Baltimore, three or four new ones having been erected in this section during the past eighteen months or two years. In the census year of 1909, 41 establishments were reported in the State by the Census Bureau at Washington, and the value of their product was put at $9,673,000. As pointed out above, the value of the fertilizer materials imported at Baltimore in a rough or raw or crude state, amounted last year to more than $6,000,000, which does not include the product of the menhaden fisheries, nor the cost of the phosphate rock brought here from Florida and other points, and which of course have no place among the imports. It is altogether likely, therefore, that if the census figures for 1909 were correct the aggregate has since been greatly exceeded, for the supposition is at least reasonable that the processes of manufacture added more than the differences between the cost of the raw imports and the total given for 1909 to the value of the finished product.

As stated, according to estimates of men thoroughly familiar with the fertilizer trade, the natural increase in the output of the factories, or rather the normal increase in the demand for fertilizers upon the Baltimore factories is from 12 to 15 per cent. a year, which, of course, must be added to the total for 1909 to get an approximately correct estimate of the value of the product last year. If the given ratio of increase were fairly constant, this would bring the aggregate for 1911 up to $12,133,811. But everyone knows that 1910 was a remarkable year with respect to the demand for fertilizers, and that the gain in that year over 1909 probably went far ahead of the ordinary normal 12 per cent., taking the lower figure to be entirely within the limits of probability. Last year, as pointed out in the first part of the review, in all likelihood developed a normal gain, notwithstanding the fact that some of the factories experienced no actual increase themselves, the output of the new factories which entered into the competition having to be accounted for. It is altogether probable, therefore, that the distribution continued to expand, even though some of the factories did not feel it to any pronounced degree.

In the opinion of well informed members of the trade the production of the Baltimore factories last year amounted to not less than 750,000 tons of manufactured fertilizer, and it may have gone as high as 800,000. Prices of mixture, of course, vary greatly and it is not easy to fix an average, but a mean of $20 a ton would give the output of the Baltimore factories, taking the production to be 750,000, a value of $15,000,000, which greatly exceeds the government estimate for all the factories in the State two years ago. Even at a lower valuation the aggregate is still very impressive and shows the extent as well as the growth of the industry, in which, according to the census report, Baltimore holds second place in the country.

As to the future it is difficult to make predictions at this time. Prospects of a brisk year have been somewhat dimmed for the present by the severe weather of the past month or six weeks, which has to a large extent stopped the distribution by tying up vessels and checked the demand, because nothing could be done in the way of getting ready for the use of fertilizers. The information from the South is that unfavorable climatic conditions have put the season back from four to six weeks, and the needs in the way of fertilizers have been accordingly reduced. But it would probably lead to erroneous conclusions to base predictions as to the results of the year on what has happened so far. The existing deficiency may be made up later on, under conditions as favorable as those of the present time are disadvantageous. The weather has a way of compensating for any excess or shortage either in temperature or precipitation, and it may be that short meteorological conditions later will continue favorable for so long a period as to enable the farmers to make up for present inactivity and even exceed the quantity of fertilizer called for.

In a review of the year it is, of course, impossible for obvious reasons, to give any trustworthy statement as to the prices of mixtures, which vary greatly and are almost entirely a matter between the manufacturer and the buyer. With regard to what might be called the raw materials, the situation is different, and the fluctuations in the quotations on the various substances can be accurately traced from week to week. The early figures for 1911 naturally reflected the buoyant feeling among manufacturers and the confidence entertained among holders of stocks in the firmness of the market, expectations, as indicated, that were based upon the results of the previous year. The year 1911 opened up with 11 and 15 tankage at $3.30 and 10, ground blood at $3.43@3.455, and ground concentrated tankage at $3. Nitrate of soda ruled at $2.10, sulphate of ammonia at $2.90, and acid phosphate at $8.40 for 14 and $9 for 16 per cent. material, which latter figure especially indicated the bullish tendency of the trade. By the latter part of the month, ground 11 and 15 tankage had eased off to $3.25 and 10, with ground blood and ground concentrated tankage unchanged, and nitrate of soda off a cent, but with sulphate of ammonia up five cents, acid phosphate being the stationary. The very next week, however, a good demand for mixtures having set in, 11 and 15 ground tankage jumped to $3.37½ and 10, with ground blood at $3.52½, nitrate of soda going back to $2.10, and sulphate of ammonia touching $3. In the ensuing two weeks there was another rise, with tankage up to $3.40 and 10, blood stationary at $3.52½, concentrated tankage at $3, and nitrate of soda at $2.10, but with sulphate of ammonia up to $3.15. The most urgent requirements seem to have been satisfied by that time, or the buying at the highest figures proved less active than had been estimated, for the price of tankage dropped back to $3.37½, then to $3.30, then to $3.25, and by May 4 to $2.95. With regard to ground blood, a peculiar development took place, this ammonite refusing to follow tankage closely, and showing at times a difference of as much as 25 cents, being by this amount higher. Ground concentrated tankage, on the other hand, remained fairly steady, being quoted until March at $3, and after that at $2.90, until the summer practically eliminated the material from the list, to reappear in the fall in August.

In the beginnig of May, fish scrap began to figure in the calculations, the earliest quotations being around $3.22½ and 10, with 11 and 15 tankage down to $2.95 and 10, and ground blood at $3.15. Scrap advanced to $3.25 and 10 the next week and remained there until the latter part of June, when the figure given was $3.20 and 10. There was a drop in the week of June 29 to $3.15 and 10, but the very next week the price advanced to $3.25 and 10, which held until September, when a further advance to $3.30 and 10 took place, the material going to $3.35 and 10, which figure was maintained practically throughout the year, with the exception of early in December, when a brief easing off was noticed.

Tankage was quoted at $3.12½ and 10 on August 3, and dropped to $3.07½ and 10 by August 24. After that an advance to $3.15 took place, which held until October 5, when the quotation was $3.15 and 10. After that a fairly steady decline was recorded, which carried this material down to $2.95 and 10 on December 7, a rise to $3 and 10 developing by the end of December. The difference between tankage and ground blood narrowed at times to as much as 5 cents, and on September 29 it disappeared altogether, this development being attributed to the more extensive use of botton seed meal in the South, which lessened the demand for animal ammoniates. By October 5, however, there was a difference of 15 cents again, and since then the variation has amounted to from 22½ to 25 cents. Concentrated tankage dropped as low as $2.70, but afterward reacted, the year ending with this material at $2.75.

The highest price recorded for nitrate of soda was about the latter part of October, when the quotations advanced to $2.25, which figure was maintained for about three weeks, after which the quotations dropped to $2.22½ and later to $2.20, which was the amount asked at the close of the year.

One of the remarkable developments of the year was the fairly steady rise in the price of sulphate of ammonia, a feature of the market that has attracted attention for several years, the tendency being toward higher figures, with occasional interruptions. The quotations, which, as stated, had started at $2.90, ran up to $3.10 by March 10, sagged to $2.92½ by June 29, and thereafter rose suddenly to $3 on July 6, then to $3.02½, and eventually to $3.22½, which was the highest price recorded for the year, the last quotation for 1911 being $3.17, a rather rapid decline having taken place in the concluding few weeks.

The price of cyanamid was maintained unchanged all the year at $2.45 per unit of ammonia, with bags not returnable, seven cents extra. In the early part of the present year, however, a reduction to $2.40 has been made. The quotations on bone remained fairly stationary at $27.50 for 4½ and 50 ground raw bone, $23.50 for 3 and 50 ground steamed bone, and $19.75 to $20 for 1 and 60 bone flour.

The range of the chief materials for the year is given below, with "and 10" to be added in every case to fish scrap and tankage, and with the prices of potash to be considered "ex store" until after quotations were withdrawn from the brokers by the syndicate, after which they were f. o. b. cars. The prices of sulphate of ammonia are

for spot. The quotations on fish scrap are f. o. b factory, while those on tankage and blood are c. a. f. basis Baltimore. The figures are as follows:—

	Fish scrap.	Tankage 11 and 15.	Ground blood	Concentrated tankage.	Nitrate of soda.
Jan. 5	..	$3.30	$3.45	$3.00	$2.10
Jan. 12	..	3.30	3.45	3.00	2.10
Jan. 19	..	3.30	3.45	3.00	2.10
Jan. 26	..	3.25	3.45	3.00	2.09
Feb. 2	..	3.37½	3.52½	3.00	2.10
Feb. 9	..	3.40	3.52½	3.00	2.10
Feb. 16	..	3.40	3.52½	3.00	2.10
Feb. 23	..	3.37½	3.55	3.00	2.10
March 2	..	3.37½	3.55	3.00	2.10
March 9	..	3.30	3.55	3.00	2.10
March 16	..	3.25	3.50	2.90	2.07½
March 23	..	3.25	3.50	2.90	2.10½
March 30	..	3.15	3.45	2.90	2.12½
April 6	..	3.15	3.42½	2.90	2.10
April 13	..	3.05	3.30	2.80	2.10
April 20	..	3.02½	3.20	2.80	2.10
April 27	..	3.00	3.18	2.80	2.10
May 4	$3.22½	2.95	3.15	..	2.10
May 11	3.25	2.95	3.15	..	2.10
May 18	3.25	3.00	3.12½	..	2.10
May 25	3.25	3.15	3.17½	..	2.12½
June 1	3.25	3.05	3.15	..	2.10
June 8	3.25	3.15	3.15	..	2.10
June 15	3.25	3.15	3.15	..	2.12½
June 22	3.20	3.15	3.17½	..	2.12½
June 29	3.15	3.15	3.17½	..	2.12½
July 6	3.25	3.15	3.25	..	2.15
July 13	3.25	3.15	3.20	..	2.15
July 20	3.25	3.15	3.20	..	2.15
July 27	3.25	3.12½	3.17½	..	2.17½
Aug. 3	3.25	3.12½	3.17½	..	2.17½
Aug. 10	3.25	3.12½	3.18	3.00	2.15
Aug. 17	3.25	3.10	3.17½	2.90	2.10
Aug. 24	3.2[illegible]	3.07½	3.15	2.97½	2.15
Aug. 31	3.25	3.10	3.15	2.97½	2.20
Sept. 7	3.31½	3.10	3.15½	2.97½	2.20
Sept. 15	3.32	3.10	3.15	2.90	2.22½
Sept. 22	3.35	3.15	3.20	2.90	2.22½
Sept. 29	3.35	3.20	3.20	2.90	2.22½
Oct. 5	3.35	3.15	3.30	2.90	2.22½
Oct. 12	3.35	3.12½	3.25	2.90	2.22½
Oct. 19	3.35	3.17½	3.30	2.90	2.25
Oct. 26	3.35	3.07½	3.30	2.90	2.25
Nov. 2	3.35	3.07¼	3.30	2.90	2.27
Nov. 9	3.35	3.07½	3.30	2.90	2.22½
Nov. 16	3.75	3.07½	3.27½	2.80	2.22½
Nov. 23	3.35	3.00	3.25	2.77½	2.22½
Nov. 30	3.30	3.00	3.22½	2.77½	2.20
Dec. 7	3.27½	2.95	3.22½	2.70	2.20
Dec. 14	3.35	2.97¼	3.22½	2.70	2.20
Dec. 21	3.35	2.97½	3.22½	2.70	2.20
Dec. 28	3.35	3.00	3.25	2.75	2.20

	Sulphate of ammonia.	Cyanamid, 18 to 20 per cent.	Bone 1½&50 raw.	Bone 3 & 50 steamed.	Bone 1 & 40 flour.
Jan. 5	$2.90	$2.65	..	..	..
Jan. 12	2.90	2.65	..	..	..
Jan. 19	2.95	2.65	..	..	..
Jan. 26	2.97½	2.65	..	..	..
Feb. 2	3.00	2.65	..	..	..
Feb. 9	3.15	2.65	..	..	..
Feb. 16	3.15	2.65	..	..	..
Feb. 23	3.05	2.65	$27.50	$23.00	$19 75
March 2	3.05	2.65	27.50	23.00	19.75
March 9	3.05	2.65	27.50	23.25	19.75
March 16	3.05	2.65	27.50	23.25	19.75
March 23	3.05	2.65	27.50	23.25	19.75
March 30	3.10	2.65	27 50	23.75	19.75
April 6	3.10	2.65	27.50	23.25	19.75
April 13	3.10	2.65	27.50	23.25	19 75
April 20	3.10	2.65	27 50	23.25	19.75
April 27	3.10	2.65	27.50	23.25	19.75
May 4	3.10	2.65	27.50	23 25	19.75
May 11	3.10	2.65	27.75	23.25	19 75
May 18	3.00	2.65	27.75	23 25	19.75
May 25	2.95	2.65	27.75	23.50	19 75
June 1	2.97½	2.65	27.75	23.25	19.75
June 8	2.95	2.65	27.75	23.25	19 75
June 15	2.95	2.65	27.75	23.25	19.75
June 22	2.95	2.65	27.75	23.25	19.75
June 29	2.92½	2.65	27.75	23.25	19.75
July 6	3.00	2.65	27.50	23.25	19 75
July 13	3.02½	2.65	27.50	23.25	19.75
July 20	3.02½	2.65	27.50	23.25	19.75
July 27	3.09	2.65	27.50	23.25	19 75
Aug. 3	3.13	2.65	27.50	23.25	19.75
Aug. 10	3.11½	2.65	27.50	23.00	20.50
Aug. 17	3.11½	2.65	27.50	23.00	20.50
Aug. 24	3.11½	2.65	27.50	23.25	20.00
Aug. 31	3.11½	2.65	27.75	23.25	20.00
Sept. 7	3.12½	2.65	27.75	23.25	20.00
Sept. 15	3.15	2.65	27.75	23.25	20.00
Sept. 22	3.15	2.65	27.75	23.25	20.00
Sept. 29	3.16½	2.65	27.50	23.00	19 50
Oct. 5	3.15	2.65	27.75	23 25	20.00
Oct. 12	3.15	2.65	27.75	23.25	20.00
Oct. 19	3.17½	2.65	27.75	23.50	20.00
Oct. 27	3.17½	2.65	27.75	23.50	20.00
Nov. 2	3.19	2.65	27.75	23.50	20.00
Nov. 9	3.19	2.65	27.75	23.50	20.00
Nov. 16	3.22½	2.65	27.75	23.50	20.00
Nov. 23	3.22½	2.65	27.75	23.50	20.00
Nov. 30	3.22½	2.65	27.75	23.50	20.00
Dec. 7	3.20	2.65	27.75	23.50	20.00
Dec. 14	3.20	2.65	27.75	23.50	20.00
Dec. 21	3.20	2.65	27.75	23.50	20.00
Dec. 28	3.17	2.65	27.75	23.50	20 00

	Acid phosphate 14%	Acid phosphate 16%
January 5	$8.50	$9.00
January 12	8.50	9.00
January 19	8.50	9.00
January 26	8.50	9.00
February 2	8.50	9.00
February 9	8.50	9.00
February 16	8.50	9.00
February 23	8.50	9.00
March 2	8.50	9.00
March 9	8.50	9.00
March 16	8.50	9.00
March 23	9.00	9.50
March 30	9.00	9.50
April 6	9.00	9.50
April 13	9.00	9.50
April 20	9.00	9.50
April 27	8.50	9.00
May 4	8.50	9.00
May 11	8.50	9.00
May 18	8.25	8.75
May 25	8.25	8.75
June 1	8.25	8.75
June 8	8.25	8.75
June 15	8.00	8.50
June 22	8.00	8.50
June 29	8.00	8.50
July 6	8.00	8.50
July 13	8.00	8.50
July 20	8.00	8.50
July 27	8.00	8.50
August 3	8.00	8.50
August 10	8.00	8.50
August 17	8.00	8.50
August 24	8.00	8.50
August 31	8.00	8.50
September 7	8.00	8.50
September 15	8.00	8.50
September 22	8.00	8.50
September 29	8.00	8.50
October 5	8.00	8.50
October 12	8.00	8.50
October 19	8.00	8.50
October 26	8.00	8.50
November 2	8.00	8.50
November 9	8.00	8.50
November 16	8.00	8.50
November 23	8.00	8.50
November 30	8.00	8.50
December 7	8.00	8.50
December 14	8.00	8.50
December 21	8.00	8.50
December 28	8.00	8.50

	Potash Muriate. 50%	Potash Sulphate. 48%	Potash Kainit in bulk. 12%	Potash Manure salt. 20%	Potash Double manure salt. 25%
January 5	$38.00	$45.75	$9.00	$13.90	$25.00
January 12	38.00	45.75	9.00	13.90	25.00
January 19	38.00	45.75	9.00	13.90	25.00
January 26	38.00	45.75	8.25	13.25	24.50
February 2	38.00	45.75	8.25	13.25	24.50
Feburuary 9	38.00	45.75	8.25	13.25	24.50
February 16	38.00	45.75	8.25	13.25	24.50
February 23	38.00	45.75	8.25	13.25	24.50
March 2	38.00	45.75	8.25	13.25	24.50
March 9	38.00	45.75	8.25	13.25	24.50
March 16	38.00	45.75	8.25	13.25	24.50
March 23	38.00	45.75	8.25	13.25	24.50
March 30	38.00	45.75	8.25	13.25	24.50
April 6	38.00	45.75	8.25	13.25	25.50
April 13	38.00	45.75	8.25	13.25	25.50
April 20	38.00	45.75	8.25	13.25	25.50
April 27	38.00	45.75	8.25	13.25	25.50
May 4	38.00	45.75	8.00	13.25	25.00
May 11	38.00	45.75	8.25	13.25	25.50
May 18	38.00	45.75	8.25	13.25	25.50
May 25	38.00	45.75	8.50	13.25	25.50
June 1	38.80	47.05	8.50	13.25	25.50
June 8	38.80	47.05	8.50	13.25	....
June 15	38.80	47.05	8.50	13.25	24.50
June 22	38.80	47.05	8.50	13.25	24.50
June 29	38.80	47.05	8.50	13.25	24.50
*July 6	....	....	....	....	....
July 13	38.80	47.05	8.50	13.55	25.20
July 20	38.80	47.05	8.50	13.55	25.20
July 27	38.80	47.05	8.50	13.55	25.20
August 3	38.80	47.05	8.50	13.55	25.20
August 10	38 80	47.05	8.50	13.55	25.20
August 17	38.80	47.05	8.50	13.55	25.20
August 24	38 80	47.05	8.50	13.55	25.20
August 31	38.80	47.05	8.50	13.55	25.20
September 7	38.80	47.05	8.50	13.55	25.20
September 15	38.80	47.05	8.50	13.55	25.20
September 22	38.80	47.05	8.50	13.55	25.20
September 29	38.80	47.05	8.50	13.55	25.20
October 5	38.80	47.05	8.50	13.55	25.20
October 12	38.80	47.05	8.50	13.55	25.20
October 19	38.80	47.05	8.50	13.75	25.20
October 26	38.80	47.05	8.50	13.75	25.20
November 2	38.80	47.05	8.50	13.75	25.20
November 9	38.80	47.05	8.50	13.75	25.20
November 16	38.80	47.05	8.50	13.75	25.20
November 23	38.80	47.05	8.50	13.75	25.20
November 30	38.80	47.05	8.50	13.75	25.20
December 7	38.80	47.05	8.50	13.75	25.20
December 14	38.80	47.05	8.50	13.75	25.20
December 21	38.50	47.05	8.50	13.75	25.20
December 28	38.80	47.05	8.50	13.75	25.20

*All quotations to brokers withdrawn; quotations below by syndicate.

Unlike the previous year, 1911 was not remarkable for the erection of new fertilizer plants, none having been projected. But various additions and extensions were made, and in other ways the confidence of members of the trade in the future found concrete expression. Half a dozen vessels are under construction or have been completed for the menhaden fisheries in Chesapeake Bay, among the new craft being several steam trawlers, which attests the feeling of this division of the fertilizer industry.

One plant, that of the Union Abattoir Company, owned by the D. B. Martin Company, was destroyed by fire on the morning of January 1 last, the loss being estimated at $100,000. On March 17 an explosion occurred in the drying plant of the same factory, one man being killed. The fire was attributed to lime in a car standing at the factory slaking and generating sufficient heat to start the blaze. The cause of the explosion, which occasioned a loss of $20,000, has not been ascertained. The factory has since been rebuilt on a more extended scale.

In December there was held a meeting of the Executive Council of the National Fertilizer Association at the Hotel Belvedere to make arrangements for the next annual meeting of the organization. The council, which was presided over by W. W. Hubbard of Baltimore, the president, settled upon July 16 and 17, 1912, as the dates, and Atlantic City as the place for the yearly gathering. Various details were left to be determined at the meeting of the council in Detroit next June. The subject of the Middle States Soil Improvement Association came up for consideration and it was decided to start a similar movement for the Eastern States.

One of the most important questions to receive attention during the year was, of course, that of potash, the negotiations between the independents and the German potash syndicate attracting much attention. As is generally known, the negotiations ended with the complete surrender of the independents, and with the syndicate once more getting complete control. This made the Baltimore distributing offices of the syndicate in a way unnecessary, and the announcement that they would be discontinued did not, therefore, come as a surprise. The change has been made, part of the force being taken to New York and part of it to Savannah. Only a shipping office will be maintained here.

The potash controversy naturally tended to stimulate the search for potash in the United States in paying quantities, and in the past few months various announcements have emanated from the Secretary of Agriculture about the discovery of potash at diverse points. It has also been stated that potash could be extracted from sea weed or kelp in sufficient quantities to supply the domestic demand. Still another, and local development, was the incorporation of a company here to extract potash from feldspart, which mineral is found in large quantities in the immediate vicinity of Baltimore. The announcement was received with much incredulity, the difficulty of extracting potash from such a refractory substance as feldspar being well known. Nor did any information as to the process to be employed make those interested feel more sanguine in regard to the matter. The head of the company which promises to undertake the work is Harry Gilbert, a real estate man of this city.

CHICAGO FERTIEIZER MARKET REVIEW.

The keystone of the fertilizer market at Chicago during the year 1911 was the price of cotton. Early in the year, farmers of the South, having disposed of their cotton at the rate of fourteen cents a pound, were well fixed financially and showed little hesitancy in giving the soil that had produced this wealth its share of profit by procuring for it generous tonics in the form of commercial fertilizers. They bought with a free hand and sent prices of both dried blood and ground animal tankage to the highest levels touched in recent years.

Later in the year, however, these same farmers obtained nine cents a pound for their cotton and became proportionately parsimonious in their purchases of soil tonics. Producers of ammoniates, on the other hand, did not appear to have the foresight to anticipate such an outcome, and in the fall of the year when there was a suggestion of another season of heavy buying by Southern consumers, they boosted prices upwards at a rate that indicated they were determined to get all there was to be gotten out of the business.

As was to be expected, they only succeeded in throttling what little demand there was in sight, and closing months found the market in a most unsatisfactory and congested condition. Thus the market closed the year, with prices going down the toboggan and buyers afraid to take hold for the fear that costs would again be increased should they show their needs.

Ground dried blood reached its zenith during the first two months of the year, when sales were made at $3.17½ f. o. b. Chicago for round lots for prompt shipment and orders for limited quantities were booked at $3.20 and better. The demand at that time was the broadest the Chicago trade had ever experienced, the use of dried blood on the farms of the Central West being much more general and lavish than in former years.

Manufacturers succeeded in closing out their stores very closely during this period and conditions were decidedly satisfactory. Late spring and summer months witnessed the usual falling off in the volume of business, but conditions continued normal and sentiment was universally optimistic.

As the fall season approached, farmers of the South harvested one of the largest cotton crops in their history, and were compelled to cash their product at a reduction of more than thirty-three and one-third per cent. from the previous year's prices for the bulk. Besides this sharp reduction in their incomes, they found themselves heavily supplied into cottonseed, which, when rendered into cottonseed meal made an economical and useful substitute for dried blood, always regarded as a luxury in the way of a fertilizing material.

Inquiries for ground dried blood at the principal distributing points then began to fall off, and as the demand contracted, the price receeded, closing the year around $2.90 f. o. b. Chicago, the lowest figure touched in nearly three years.

Ground high grade tankage also opened the year at a higher level than in a decade or more, selling during January and February, 1911, at $2.97½ and 10 Chicago for round lots and up to $3 and better for limited quantities.

Because it was cheaper than blood, ground tankage was not so easily susceptible to the depressing influence of cheap cottonseed meal and it held its value more rigidly than blood, but continued lack of support finally had its effect on the market, and during the latter part of the summer prices began a downward slide which continued until after the turn of the new year.

While the market for ground blood showed little resiliency, there was a short period during the fall of 1911 when ground tankage gave a promise of duplicating the previous year's high prices. This was in the latter part of September. Up to that time the demand for tankage had been so nearly lifeless that manufacturers were sure, once started, the buying would be of such urgent character they would have little difficulty in controlling prices.

Brokers were not so sure and advised cautious bidding. This injected into the trade a feeling of uncertainty which intimidated prospective buyers, and when the arrival of their first inquiries were followed by abrupt upturns in values, quotations being boosted as much as 10@15c. per unit in one day, they quickly withdrew from the market and left prices to sag of their own weight.

This sagging continued all through October, November, December and January, the final prices of the year being around $2.47½ and 10 Chicago, or 50 to 52½c. lower than the high figure of the year, and the lowest price quoted on ground tankage at this point in two years.

Although high prices at the beginning and low prices at the close of the year usually reflect an unsatisfactory condition in the trade, dealers in animal ammoniates were all agreed that so far as the volume of business transacted was concerned 1911 was as good a year as any of recent trade history.

Brokers and manufacturers who entered the market with a view of making money through speculative operations were for the most part greatly disappointed, as they either lost money or failed to realize any material profits. Merchants who did a strictly spot business and followed the trend of values closely, on the other hand, had a prosperous year.

While the trade in dried blood and ground tankage finished the year 1911 in a wilted and pessimistic mood, the concentrated manures branch of the market was reported in a healthier condition at any previous time in its history.

This division of the fertilizer market, devoted to the manufacture and selling of pulverized sheep and hog manures, and of pulverized and shredded cattle manure, is yet in its infancy, but that it is a decidedly healthy and vigorous infant is evidenced by the fact that sales for the year aggregated somewhat in excess of 2,500 tons.

One factor in favor of the concentrated manures was their stability in prices. The standard of value, being once established, remain almost without a single change from one end of the year to the other. This absence of fluctuations made it possible for sellers to solicit advanced business without the fear of being caught in a jam at the time of delivery and for buyers to anticipate requirements knowing that they would not be found heavily stocked with high costing materials on a declining market.

Principal among the concentrated manures was pulverized sheep manure, which sold at $18 a ton throughout the year. Pulverized cattle manure also held stationary throughout the period, selling at $16.00 a ton. Shredded cattle manure, however, opened at $14 a ton and rose to $15 at the close. Pulverized hog manure sold at $15 and was well taken at the price.

Other fertilizer materials, such as sulphate of ammonia, basic slag, potash salts and garbage tankage, received moderate support throughout the year and their prices followed closely the values of ground blood and animal tankage.

PHILADELPHIA FERTILIZER MARKET.

In reviewing the fertilizing trade for 1911, we find that the spring trade was quite equal to the same period in 1910, but the fall trade fell off materially.

It appears as though there was considerable over-production, and some manufacturers preferred to dispose of their stock rather than carry it over another year, were forced to make drastic reductions and to turn their product into cash.

This, of course, caused a falling off in prices, and a considerable reduction in the annual profits The cost of raw materials in the first half of the year were very firm in price, but since that time there has been a gradual reduction in prices on all fertilizing commodities, excepting potash salts, nitrate of soda, and sulphate of ammonia, which have advanced, the last named being very strong up to the present time.

The unsettled condition of German potash salts had a tendency to hold back orders for these goods until late in the season, so that there were very heavy deliveries made just before the end of the year. On the whole, however, the consumption of potash salts for 1911 was the largest in the history of the country.

Collections were inclined to be slow on account of the short crops in the spring, due to severe drought. In other sections of this district this was not apparent, and the collections were satisfactory.

The conditions existing among the farmers were markedly different. Those not seriously affected by the drought and had good crops made more money than for years, while those who were more seriously affected and who had little to sell barely made expenses. Nevertheless, we are credibly informed that there is throughout the Eastern States an increase in the consumption of fertilizers of from 10 to 15 per cent. It is rather difficult to prophesy expectations in this business for 1912. Experiences of the past year may be reflected on the next, together with the disadvantage of an increased production, which has to be sold at whatever price is obtainable. On account of the falling markets for organic ammoniates and acid phosphates, the outlook for the coming season has not been auspicious, as large factories report fewer orders on hand at present than at a similar time in many years past.

No legislation has taken place in Pennsylvania during the past year, so that the business has not been interfered with by new laws and requirements. Nor can we learn that there has been any changes in railroad

freights that would act to the disadvantage of the makers.

We are also pleased to report that we cannot learn that any labor troubles have existed during the year in this line of business, which certainly is a great relief to the manufacturers.

It is to be regretted that we have no means of obtaining reliable statistics of the production and sale of fertilizers, and we deem it unwise to state figures which are purely conjectural.

PETROLEUM INDUSTRY OF THE UNITED STATES.

Petroleum realizations in this country during 1911 were of a noteworthy and momentous character and have probably exercised a greater effect in bringing the general industry into more favorable recognition than have any other developments within recent years. The crystalization of the more favorable states was, however, not destined of fulfilment before the situation had been subjected to further disparagements, but there could seem to be no reasonable doubt that with the dawn of the new year the most trying periods had been weathered and that the clouds of the last year or two had revealed their silver lining, with the future of fulsome promise for a new era of prosperity. We shall treat in its proper place each of the factors which has contributed its bearing on the general situation, but our first consideration concerns that of most material significance, the particulars concerning production during last year. Accepting as a basis of reckoning the figures compiled by our correspondents in the various producing centers, as well as those of government origin, we find that all records were eclipsed by the returns for 1911, which maintained their proportionate pace in the advancing course of the country's production during recent years. Last year's total is estimated at between 220,000,000 and 225,000,000 barrels, while 1910 had to its record 214,668,580 barrels; 1909, 184,755,606 barrels; 1908, 178,527,355 barrels; 1907, 166,095,335 barrels, and 1906, 126,493,936 barrels. The feature of the 1911 showing is undoubtedly the substantial increase in California's contribution. Upon this item does the 1911 supremacy find its principal support, for a gain of approximately 6,000,000 barrels does much to counteract the declining output of the older fields of the country. The mid-continent field last year forged well ahead of its previous record. Another impressive point in the 1911 compilation is the gain credited to the Gulf coast region. The Pennsylvania and Lima production was destined to further set-back last year, and the Illinois showing marks a disparaging comparison with that for 1910.

California takes easy laurels in the 1911 returns with 83,743,724 barrels or nearly three-eighths of the country's total. The value of the State's petroleum production surpasses that of any other industry, including gold or citrus fruit. In 1910 California produced 77,697,568 barrels, so last year's gain amounts to 6,046,156 barrels. Last year's output was of a more steady and gradual character than that of 1910 when one well, the famous Lakeview gusher contributed nearly 8,000,000 barrels to the year's total. The Sunset-Midway field was again the mainstay of the State's production last year with 27,141,671 barrels, or nearly 7,000,000 barrels in excess of the 1910 record. The only other valley field to surpass its previous yield was McKittrick; Coalinga and Kern River registered slightly lessened results. Of the coast fields Santa Maria was far in the lead last year, scoring a moderate gain over 1910. Fullerton led in the returns from the Southern fields, with an increase over the record of the former year. There were 800 wells completed in California last year as compared with 1,013 for 1910. There were abandoned 129 wells in 1911 and 136 in 1910.

The mid-continent field takes second place in the production table for 1911, as it did the two previous years. Last year's output reached a total of 59,332,850 barrels, as against 53,429,313 barrels in 1910, and 48,007,267 barrels in 1909. All indications, however, seem to point to the fact that the field has reached its high level of production and that the current year will mark a substantial decline in its resources. Last year was a record one for the number of wells drilled in the mid-continent field, 4,956, and of this number 3,653 were successful in finding oil. The estimated new production from the 1911 wells was 177,656 barrels, an average of 48.63 barrels per well. Among the more important developments in the field last year were the Delaware shallow sand extension, the discovery of the Ramsey pool in the Cherokee, the broadening of the Hogshooter toward Nowata, and the opening of the Osage, Pawnee and Jenks pools. In the Osage wells of 1,000 to 3,000 barrels daily capacity were of sufficient occurrence to keep the production in the neighborhood of 20,000 barrels a day, but there was a gradual decline toward the year's end.

Illinois ranks third in 1911 production, but that field failed to approach its record of the previous year by 3,240,555 barrels. Comparative figures are 29,903,007 barrels in 1911 and 33,143,362 barrels in 1910. These results are all the more impressive when one considers that Illinois was not recognized as a factor in the industry until 1905, when the total output reached 181,684 barrels. In the six years of active development, 1908 was the banner period with 33,686,238 barrels. The setback in the 1911 results, after a gain of more than 2,000,000 barrels during 1910, can be accounted for by the fact that the producing formations are beginning to show the heavy drain upon their resources by the persistency of drilling operations which have brought the State to a place among the leaders within such a comparatively short period. The feature of Illinois developments last year was the discovery of the Carlyle pool of Clinton county, the possibilities of which were first disclosed by the bringing in of a 500-barrel well in April. The heaviest producer started at the rate of 2,000 barrels a day. Repeated efforts to extend the limits of the pool resulted in disappointment, and every indication seemed to point to the conclusion that the productive area was of narrow scope. Lawrence county, with its numerous oil sands, was the mainstay of the 1911 production, furnishing the basis for the keenest activity in operations. Of the 1,365 wells drilled in Illinois last year, 1,061 were successful in finding oil, while 40 produced gas and 261 were in the duster column. The new daily production amounted to 66,851 barrels. During the year 198 wells were abandoned. Wildcatting was a feature of 1911 operations, but there was little to reward these ventures. In twelve counties, where experimental drilling was undertaken, 29 wells were completed during the year, and all fell in the duster list with the exception of one in Bond county, in which gas was found.

The production of the Pennsylvania fields during 1911 is variously estimated from 22,800,000 to 28,000,000 barrels, but whatever its actual output may have been, there is no doubt about its taking fourth place in the 1911 summary. The indications point generally to the fact that the production of the high grade fields last year fell below that of the former year, which was estimated at 23,400,000@26,500,000 barrels. Field work does not appear to have been prosecuted with the same degree of activity as previously, and the 1911 summary records a decrease in completed wells. In the group of States comprising the Pennsylvania fields by far the most interesting developments last year were realized in West Virginia. The feature of operations in that State was the discovery of the Kanawha county pool toward the end of the year. All records of the county were broken in the bringing in of wells of the gusher type, some of them starting at the rate of 100 barrels an hour. The finding of a new Gordon sand field in Wetzel county early in the year gave promise of a prolific development, but further drilling failed to disclose anything to support this theory. Another disappointment was experienced in a prospective pool in Richie county. Considerable activity marked Roane county operations, principally for gas. Southwestern Ohio operations contributed materially to the activity of the Pennsylvania fields last year. With the realization that the Bremen-Junction City development of Fairfield and Perry counties had passed its high mark, operators directed their attention to the new Straitsville district in Perry county and were rewarded by developing an extension to Gore across the border to Hocking county, and this district is now one of the most promising in the high grade fields. Central Ohio was under active gas development last year, and the results were generally of a gratifying character, the field being regarded as probably one of the most prolific in gas in the country. In the old Pennsylvania field interest was revived in February following the bringing in of a well rated as a 900-barrel gusher in Greene county. A well of much greater than the average capacity was brought in in Allegheny county, but probably the most lasting attraction in Pennsylvania was the town lot development at Canonsburg, in Washington county. The gusher capacity of the wells surpassed the most sanguine expectations.

The production of the Kentucky field, which is frequently grouped with those of the Pennsylvania classification, was slightly below the half-million barrel mark of last year, showing little variation from the yield of the previous year. The mainstay of the 1911 output proved the Wayne county pools. Other counties contributing to the results were Whitley, Wolfe, Bath, Rowan, Floyd and Lawrence. The development of newer districts constituted a feature of last year's showing in Kentucky. The defined areas have undergone some changes in the State, but in instances where once prolific pools have declined new extensions of the same districts have proved a compensating return. The prospects at the close of the year for drilling of a wildcat character were regarded as more encouraging than for a number of years. The advancing course of crude values in effect late in the year is expected to furnish the incentive for keener field work that has been marked by its absence during the period of low prices.

The Lima fields of Northwestern Ohio and Indiana registered a further decline in production last year. The output in 1911 is given as about 6,250,000 barrels, as compared with 7,253,861 barrels in 1910. The greatest curtailment in field work last year was experienced in Indiana. There were but 117 completions in that field during the twelve months, with the new daily production amounting to 1,096 barrels, while the 1910 record showed 365 completions and 8,665 barrels of new production. A comparison of the Ohio returns shows 527 completions, with 6,381 barrels of new production in 1911, and 572 completions and 6,745 barrels of new production in 1910. Probably the most impressive feature of field statistics last year was the extent of the abandoned wells, amounting to 1,142 in Northwestern Ohio and 1,259 in Indiana. There was a suggestion of the old-time resources of the field which was drilled in Seneca county in the Ohio end in February, having an initial capacity of 550 barrels a day. The next best well in the section was one credited with 250 barrels, in Wood county, in December. The feature of the Ohio developments last year was the finding of oil at a much greater depth near Tiffin in Seneca county. Indiana had to its credit but three wells yielding 100 barrels a day, and these were located in Delaware county in the Muncie district. There are believed to be possibilities in the southern section of Indiana, as comparatively little of that part of the State has been under consistent development work. Near New Albany natural gas was found in good quantities, and there is a promise that an oil formation may be discovered there.

A review of the Gulf Coast region for 1911 records a production of 8,877,651 barrels in Texas, and 12,784,809 in Louisiana, as compared with 8,606,862 and 7,290,396 barrels, respectively, for the previous year. All of the coastal districts of Texas recorded a decreased output, but the development of the new Electra field in Wichita county, in the northern part of the State, close to the Oklahoma line, contributed more than a million barrels to the gross output. The discovery of the Electra pool was the interesting development of the year. The production reached its high mark at 359,891 barrels in November. Humble was the most prolific source of Texas production last year with 2,170,210 barrels. Sour Lake took second place with 1,408,977 barrels. The shipment of crude and refined products from Port Arthur and Sabine by vessel in 1911 amounted to 11,987,589 barrels, of which 2,604,309 barrels were crude and 9,333,280 barrels were refined products. In the coastal fields of Texas, 448 wells were completed last year, of which 311 were producers with an initial output of 24,261 barrels daily. Humble was by far the most active field, with 146 completions to its credit. Caddo proved the mainstay of the Louisiana production last year, with a total of 8,359,662 barrels. The Vinton field which found a place in the production column for the first time in 1910, was in second place last year with 3,232,673 barrels. The Vinton field, however, proved of very limited area, and at the close of last year its output was rated as barely 2,000 barrels a day, as compared with more than 20,000 barrels a day in February. Completions in Louisiana last year aggregated 464, with 340 in the producing column, showing an initial of 206,683 barrels a day. To this number of completions the Caddo field contributed 363, with the daily output amounting to 133,173 barrels from 288 producing wells. In addition to its oil resources, the Caddo field is regarded as one of the most prolific in gas in the country.

No particulars are as yet available concerning the results of operations in the fields of the miscellaneous grouping, but their contribution to the 1911 total is estimated at approximately 400,000 barrels, or a gain of about 40,000 barrels over the 1910 record.

The following summary presents the details of the 1911 production by fields, with comparisons for 1910 and 1909. Complete returns from the Pennsylvania and Lima-Indiana fields have not been received, but the estimated figures are believed to be fairly near the actual results:—

	1909.	1910.	1911.
Appalachian*	26,535,844	26,891,379	†23,000,000
Lima-Indiana	8,211,443	7,253,861	†6,250,000
Illinois	30,989,339	33,143,362	29,903,007
Mid-continent	48,007,267	53,429,313	59,332,850
Texas	9,256,972	8,606,862	8,877,651
Louisiana	3,224,363	7,290,396	12,784,809
California	58,191,720	77,697,508	83,743,724
Other	358,658	358,839	†400,000
Totals	184,755,606	214,668,580	224,292,041

* Includes Kentucky.
† Estimated.

Crude Market.

The depreciation in nearly all of the varieties of crude, which was a ruling development of 1910, as an incident of the disturbing conditions of that year, played almost a negligible part in the history of 1911, for every posting within the period, with one exception, marked a recovering tendency. That the crude market came into more favorable recognition last year was a logical outcome of the conditions which were characteristic of the general petroleum situation not only in this country, but at the sources abroad. The story is succinctly told in the growth of requirements of the domestic product, both for home and export account, and the generally declining course of the foreign output. Probably the most compelling change in domestic crude last year was the advance of 5c. in the grades of the Pennsylvania classification on December 26, whereby the higher products were established at $1.35, with other varieties ranging from 82 to 99c. It represented the first change in the oils since June 11, 1910, when a decline from $1.35 to $1.30 in the higher grades became effective and it marked the first advance since March 13, 1907, when prices rose from $1.73 to $1.78. The fields yielding this distinctive grade of oil are no longer capable of supplying wells of the caliber of the later developed sections of the country and a large proportion of the Pennsylvania production comes from pumping wells of very low individual capacity. During the last few years many complaints have been voiced regarding the unremunerative returns to the smaller producers at the declining scale of crude prices, and not a small aggregate of the wells yielding from one to ten barrels a day is believed to have been permitted to remain almost idle at the prevailing prices. Refiners are eager to secure all they can of the Pennsylvania product, from which the illuminating grade is derived to the extent of 67 per cent., whereas the next richest yield is found in the Lima oil, with 43 per cent. Kentucky crude was advanced 3c. to 48c. for Ragland and 5c. to 79c. for Sumerset at the same time.

The first grade of crude to reflect the more favorable status of the industry was Oklahoma, rising 2c. to 44c. on January 2 and scoring similar advances on May 2, June 14 and September 16, the last change bringing the market to 50c. The increasing consumption and the lessening production were the factors for the enhancement. The Caddo product of Louisiana also assumed a firming tendency early in the year, from 42 to 44c. on January 3. Distinction was made between the heavy and light Caddo varieties by a posting of March 13, the former being listed at 44c. and the latter at 50c. On May 2 they were marked at a higher level, 50c. for heavy and 55c. for light, following a more active demand. The latter maintained its upward tendency to 60c. on June 14 and 62c. on September 15, while the heavy product sustained a setback to 40c. on August 8, the output having outstripped the demand. The first of the Eastern grades of crude to reach a lighter level was Princeton, the heavier variety of Indiana, by 3c. to 63c. on May 2, followed by advances to 65c. on June 14 and to 67c. on September 15. Several other varieties of the Eastern fields shared in the latter move, North Lima from 82 to 84c., South Lima and the higher Indiana oil from 77 to 79c. and Somerset, the lighter Kentucky product, from 72 to 74c. These changes were believed to be warranted with a view of stimulating the production. Illinois crude responded to the improving market conditions on May 2, when an advance of 3c. brought light to 63c. and heavy to 55c. The former was more favored by later developments, touching 65c. on June 14 and 67c. on September 15, but the heavy product shared in the upward move on September 19 to 57c. The gains in Illinois furnished another instance of the effect of diminishing production.

Refined and Products.

The force of the conditions which had exerted such a depressing bearing on the market for illuminating oils during 1910, whereby prices had been subjected to the most radical reduction in the history of the country's industry, was destined to lend its further effect within the early part of the year under review, an additional cut of fifteen points becoming effective in the local export schedule on April 29, establishing 110 test at 3.75c. in bulk, 7.25c. in barrels and 8.75c. in cases, with 150 test at 1c. premium. This had been the first change in the market in more than six months and was associated with the necessity of still sharper tactics by American refinery interests in the maintenance of their share of the foreign trade against the aggressive campaign waged by the leading sources in Europe and the Dutch East Indies. There were at that time gratifying evidences in the records of our export statistics that the American product was more than holding its prestige abroad, the lowering scale of prices contributing generally to broadening fields of consumption. As the year advanced, the reports on the export trade became more gratifying and when an advance of ten points in the export schedule was announced on September 16, signalizing a turn in the market after four years of unchecked depression, one of the darkest periods the petroleum industry had suffered seemed to be relegated into history, as the prospects were most hopeful that the trade pendulum was swinging in full rebound. No further change was destined to mark the remaining months, but the general situation commanded increasing confidence and the volume of the export trade grew steadily as the year neared its end. Competition on the part of foreign refiners had been minimized with the diminishing trend of production abroad and the expansion of consumption of the il-

luminant product. A basis for interesting comparisons is afforded in the tables of exports printed in another column.

The following summary represents the high and low quotations by months for standard and water white refined per gallon for export from New York, bulk, barrels and cases, cargo lots:—

STANDARD WHITE (110 TEST).

	Bulk		Barrels		Cases	
	High.	Low.	High.	Low.	High.	Low.
January	3.90	3.90	7.40	7.40	8.90	8.90
February	3.90	3.90	7.40	7.40	8.90	8.90
March	3.90	3.90	7.40	7.40	8.90	8.90
April	3.90	3.75	7.40	7.25	8.90	8.75
May	3.75	3.75	7.25	7.25	8.75	8.75
June	3.75	3.75	7.25	7.25	8.75	8.75
July	3.75	3.75	7.25	7.25	8.75	8.75
August	3.75	3.75	7.25	7.25	8.75	8.75
September	3.85	3.75	7.35	7.25	8.85	8.75
October	3.85	3.85	7.35	7.35	8.85	8.85
November	3.85	3.85	7.35	7.35	8.85	8.85
December	3.85	3.85	7.35	7.35	8.85	8.85

WATER WHITE (150 TEST).

	Bulk		Barrels		Cases	
	High.	Low.	High.	Low.	High.	Low.
January	4.90	4.90	8.40	8.40	9.90	9.90
February	4.90	4.90	8.40	8.40	9.90	9.90
March	4.90	4.90	8.40	8.40	9.90	9.90
April	4.90	4.75	8.40	8.25	9.90	9.75
May	4.75	4.75	8.25	8.25	9.75	9.75
June	4.75	4.75	8.25	8.25	9.75	9.75
July	4.75	4.75	8.25	8.25	9.75	9.75
August	4.75	4.75	8.25	8.25	9.75	9.75
September	4.85	4.75	8.65	8.25	9.85	9.75
October	4.85	4.85	8.35	8.35	9.85	9.85
November	4.85	4.85	8.35	8.35	9.85	9.85
December	4.85	4.85	8.35	8.35	9.85	9.85

There was no change in domestic prices for illuminating oils last year, the market being steadily maintained at 5½c. in tank wagon, and 8¾c. in barrels for 110 test, and 6@9¼c., respectively, for 150 test.

Changes in the local naphtha products last year comprised a decline of 1c. to 10c. in varnish makers' and painters' naphtha on January 23, under the influence of competition, stimulated by a backward demand; a revision of 1¾c. to 20c. in 86 degrees gasoline, as a result of quiet trading; an easing in the auto naphtha from 13¾c. to 12¾c. and in stove gasoline from 13¾c. to 12¾c. by May 1, under a similar condition. The 74@76 and 68@72 degrees gasoline were also quoted at a decline to 17c. and 14c., respectively, at the same time. On December 11, the 86 degrees product scored an advance to 22c., based on light supplies. In the export schedule the first change of the year was an advance of 1c. in stove gasoline, due to freer sales, and on December 15 the whole line was advanced ¼c. as an incident to the increasing movement. The extent of the growth of our foreign trade in naphtha is well widened in the summary of statistics printed in another column. Earlier in the year there seemed to be prospects of keeping better pace with the growing consumption of naphtha by the opening of new fields especially adapted for the production of the lighter derivatives, as well as by the success of process of conversion from natural gas. The demand lately has proved of a character to lend encouragement to the further yield of these products.

Lubricating Oils.

The market has followed an even course throughout the year. The variation in crude quotations was not sufficient to justify any departure in the schedule for the lubricants, and there was apparently nothing in the general trade conditions of the latter to reflect any tangible bearing upon prices. Reference to the export figures in another column will show the satisfactory scope of the foreign trade last year.

EASTERN FIELDS.

A general review of the high grade petroleum fields of the Mississippi River, including Illinois, Indiana, Northwestern, Central and Southeastern Ohio, Kentucky, West Virginia, Pennsylvania and Southern New York, for the year 1911, shows unusual activity prevailed in some of the districts, while others were not as active as they were in former years, but, as a whole, the trade is well satisfied with the results obtained by the drill. The year shows a total of 7,031 wells completed, of which 1,370 were real failures and 1,050 were gas wells, leaving 4,611 which were producing wells, with a total production of 102,685 barrels. This is considered a very good year's work for fields that have been drilled over and over for many years. November was the most active month in the number of completions. The largest new production of any month for the season was in July, when some remarkably large producers were found in the Illinois end of the field to increase the production.

The prices of the crude product remained stationary during the season, but the fact that the stocks were drawn upon at an alarming rate signifies increases in the prices of the raw product, and they started upward with the coming of the new year, and the trade hopes to see them higher during 1912 than for a long period.

The wells of the high-grade fields during 1911 were distributed by States and fields as follows:—

Field	Comp.	Prod.	Dry.	Gas.	Aban.
Pennsylvania	2,017	4,912	281	237	...
Illinois	1,365	66,851	264	41	198
Southeast. Ohio.	1,197	10,294	390	65	...
West Virginia	1,192	10,726	215	346	...
Northwest Ohio	527	6,381	32	15	1,142
Central Ohio	480	603	120	335	...
Kentucky	136	1,822	33	3	...
Indiana	117	1,096	35	8	1,259
Totals	7,031	102,685	1,370	1,050	2,599

The above wells were completed by months during the year as follows:—

Month.	Comp.	Prod.	Dry.	Gas.
January	511	8,239	98	96
February	493	6,511	103	93
March	447	6,040	100	68
April	480	8,156	97	76
May	574	8,356	120	76
June	645	8,439	133	81
July	637	11,885	134	84
August	678	10,759	150	72
September	603	9,566	107	108
October	639	8,072	110	102
November	682	9,997	117	116
December	582	6,665	101	78
Totals	7,031	102,685	1,370	1,050

Oil producing wells, 4,611.
Average production per well, 22¾ barrels.

The pipe line statistics for the year in the high-grade fields show that the runs from the wells amounted to 54,102,745.66 barrels, while the deliveries were 81,357,810.34 barrels, showing that the stocks of oil dwindled 27,255,064.68 barrels. Owing to the changes in the subsidiary companies for December, the runs and deliveries are not as accurate as usual, and as the figures have not as yet been completely compiled showing the stocks held by the various companies, the stocks are omitted, but they are somewhere near 35,000,000 barrels.

The runs and deliveries of all high-grade fields east of the Mississippi River each month during 1911 were as follows:—

Month.	Runs, barrels.	Deliveries, barrels.
January	4,532,611.09	6,657,917.38
February	4,239,043.49	5,915,119.36
March	5,090,177.94	6,736,735.81
April	4,508,768.78	6,677,734.28
May	4,861,767.03	6,936,247.18
June	4,629,126.48	6,550,115.42
July	4,436,193.58	7,184,806.75
August	4,611,320.42	6,859,237.68
September	4,412,932.06	6,923,266.65
October	4,483,741.98	7,352,922.36
November	4,032,124.70	6,453,980.55
December	4,264,938.11	7,103,725.92
Totals	54,102,745.66	81,357,810.34
Monthly averages	4,508,562.14	6,778,150.86
Daily averages	150,285.40	225,993.92

The above runs and deliveries were from the various high-grade fields during the year as follows:—

Month.	Runs, barrels.	Deliveries, barrels.
Illinois	26,529,416.37	14,122,344.12
Pennsylvania	19,152,392.87	51,713,709.97
Southeastern Ohio	3,458,024.02	31,680.39
Northwestern Ohio	3,397,576.24	6,130,983.27
Indiana	1,094,037.24	9,249,901.18
Kentucky	471,298.92	109,191.42
Totals	54,102,745.66	81,357,810.34

The West Virginia runs and deliveries are included in the figures for Pennsylvania.

Pennsylvania.

Outside of Ohio more wells were completed in Pennsylvania during 1911 than in any other State producing crude oil east of the Mississippi River. Pennsylvania and Southern New York are one field, while Ohio has three fields, viz: Northwestern, Central and Southeastern Ohio fields, and the three combined completed more wells during the year than Pennsylvania and Southern New York. During the year there were 2,017 wells drilled in the Pennsylvania fields, of which 281 were dry holes and 237 were gas wells, leaving 1,499 oil producing wells, with a production of 4,912 barrels, or an average of about 3 1-3 barrels per well, which is a good average for the old field.

The year 1911 was ushered in with a 900-barrel gusher found in February on the Hagan farm, in Spring Hill township, Greene County, and located only about two miles north of the Pennsylvania-West Virginia State line. No other gushers were found until in April when the test near Perrysville, Allegheny County, was drilled in on the Schwartz Bros. farm, and rated good for several hundred barrels. Following the completion of this well, much leasing was done, and heavy bonus prices were paid for leases close to the then gusher, but nothing outside of small pumpers and dry holes were found near the good well, and the supposed boom bursted.

The next find of attraction was at Cannonsburg, in Washington County, where a producer good for about 60 barrels was found on the Neil lot, and followed by a more productive well on another lot. While the first well attracted some considerable attention, it was the second completion that brought the leading oil operators to the new field, and town lot leases sold at fancy prices. A real town lot boom started and remains active, as quite a number of wells are yet drilling. The year had hardly passed when another gusher, the largest in the town lot pool, was completed, with a production of 750 barrels, which will be an incentive for additional drilling. So far the big acreage property around the Cannonsburg town lot field has not been tested, although it is all held under lease. The year 1911 closed with Cannonsburg the leading attraction of the old Pennsylvania fields.

Toward the end of the year the old Bristoria field, in Greene County, came forward with a 300-barrel gusher on the Headley farm, and prospects were good for the finding of an extension to the field, but the second well developed into a very light producer. It is evident that the Pennsylvania fields have seen their best day, and are now growing backward at a rapid rate.

The completions in the Pennsylvania-Southern New York fields for the year 1911 were divided by months as follows:—

Month.	Comp.	Prod.	Dry.	Gas.
January	100	204	17	16
February	97	345	19	14
March	87	154	23	9
April	130	313	32	13
May	168	319	33	18
June	198	368	28	18
July	190	435	19	22
August	222	611	34	20
September	215	517	16	29
October	210	507	22	31
November	227	695	25	28
December	173	444	13	19
Totals	2,017	4,912	281	237

The runs and deliveries of crude from the Pennsylvania-Southern New York fields, each month during 1911, were as follows:—

Month.	barrels. Runs,	barrels. Deliveries,
January	1,653,982.26	4,399,517.36
February	1,572,557.08	4,025,271.27
March	1,744,551.20	4,458,735.32
April	1,642,330.55	4,671,296.16
May	1,801,934.18	4,628,348.37
June	1,687,571.76	4,228,969.46
July	1,462,717.26	4,738,576.80
August	1,556,008.18	4,526,728.72
September	1,447,052.07	4,404,254.60
October	1,489,104.43	4,755,098.83
November	1,387,517.75	3,955,872.28
December	1,497,066.15	2,921,090.80
Totals	19,152,392.87	51,713,709.97
Monthly averages	1,596,032.74	4,309,475.83
Daily averages	53,201.09	143,649.19

West Virginia.

The year 1911 was not a prosperous one for the oil trade in the little mountain State of West Virginia, but 1912 looks at though the most important finds in Kanawha county would develop something for the trade to work upon. The first gusher to be drilled in the Kanawha county district, was the Barth-Schwartz farm, by the Ohio Fuel Oil Company, that started at 500 barrels, and followed by the Myers farm well, a little better than 100 barrels. Following these two gushers came the Hamilton Oil Company's well on the Graham heirs' land at 600 barrels, but it was the Ohio Fuel Oil Company's luck to break the monotony by bringing in a gusher in the second week on the Firth farm that produced 35 barrels an hour, setting all producing records for oil wells in Kanawha county.

Early in 1911 there was some excitement in the Grant district in Wetzel county, where a new Gordon sand field was found on Fallen Timber Run, and it looked as though a new and important pool had been discovered, but further drilling failed to show anything but small producers. In Church district of this same county early in April a test was put down on the Hemelrick farm and the well produced 200 barrels, but like the Grant district, the later wells drilled showed nothing but small producers or dry holes, and with it went the prospects of another productive pool. Another promising pool was unearthed on Indian Creek, in Ritchie county, but was drilled up so rapidly that the production went to so small an average that the trade took to other districts to do test work. None of the shallow sand counties showed anything out of the ordinary for the year. It was Roane county which took the lead in development work at the first of the year, and maintained that position to the close, but may be supplanted by Kanawha county in the near future. The fact that the big gas companies control the territory in Roane county is the reason for the great activity. The gas companies also done active work in Lewis, Doddridge, Marion and Harrison counties, all in the deep sand districts. Much test work was done in Clay, Jackson, Putnam, Lincoln, Cabell, Wayne and other counties, but with little success. A large amount of wildcat work will be done the present year and leaseholders are of the opinion that the West Virginia fields will extend southwest across the Big Sandy River into Kentucky.

During 1911 there was a total of 1,192 wells drilled in the West Virginia field of which 215 were dry and 346 gas wells, the producing wells showing 10,726 barrels. These wells were drilled by months, as follows:—

Month.	Comp.	Prod.	Dry.	Gas.
January	102	809	19	30
February	108	938	24	37
March	107	763	19	31
April	100	856	14	39
May	96	981	10	39
June	81	787	11	25
July	105	1,015	20	25
August	107	834	28	28
September	101	709	19	31
October	98	865	17	23
November	80	1,308	12	22
December	107	870	22	25
Totals	1,192	10,726	215	346

The runs and deliveries of crude oil from West Virginia fields is included in the Pennsylvania and Southern New York reports.

Southeastern Ohio.

A review of the Southeastern Ohio fields for 1911 shows that a total of 1,197 wells were drilled. The new production of these wells were 10,294 barrels. There were 390 dry holes and 65 gas wells, leaving 742 that produced oil in small quantities, especially the wells in the shallow sand pools, while the deep sand pools in the Clinton limestone fields of New Straitsville, Gore, Bremen and Junction City were more productive.

It was early in the year that operators discovered the fact that the Bremen-Junction City fields had seen their day, and something new would have to be found to keep the deep sand end of the Southeastern Ohio field before the public. Realizing this fact leasers started work in the old coal sand districts of New Straitsville, in the southwestern corner of Perry county. A test was started and the drill penetrated an oil pay sand at close to 3,100 feet in depth. Being expensive development work, the owners did not rush things, but worked along in a careful manner until the field was extended westward to Gore, a hamlet in Northewestern Hocking county. When the fact was discovered that a pool was found the larger operating concerns took a hand, and with the result that the Gore-Straitsville field is one of the most promising in the country. Tests were sunk a souple of miles northeast from Straitsville and failures were expected, but the Hazelton farm test proved a gusher and a new addition was made to the pool, which caused active leasing and many new locations. The pool is extending west and southwest and 1912 should see much wildcat work around Logan, in Hocking county, where much land has been leased.

The counties of Washington and Morgan in the more shallow sand districts has considerable work for the year, but no new pools were found. Neither were extensions found in Monroe, Jefferson, Belmont, Noble or any other counties.

The wells of the Southeastern Ohio field during 1911 were by months as follows:—

Month.	Comp.	Prod.	Dry.	Gas.
January	89	847	24	4
February	82	853	26	2
March	83	646	24	3
April	96	677	27	8
May	99	1,222	28	6
June	115	699	37	7
July	108	567	45	8
August	111	767	45	6
September	101	840	31	8
October	105	851	38	3
November	108	1,376	35	7
December	100	969	30	3
Totals	1,197	10,294	390	65

The runs and deliveries of oil from the Southeastern Ohio fields for the months during 1911, were as follows:—

Month.	Runs. Barrels.	Deliveries. Barrels.
January	280,007.09	2,874.46
February	276,226.13	2,354.16
March	300,978.45	2,222.87
April	276,723.36	2,489.13
May	307,447.24	2,078.75
June	299,297.83	4,316.47
July	272,175.54	2,561.00
August	291,844.58	1,624.10
September	282,903.31	5,247.65
October	291,796.16	3,376.32
November	281,350.44	2,538.48
December	297,273.88	No report
Totals	3,458,024.02	31,680.39
Monthly averages	288,168.68	2,640.03
Daily averages	9,605.62	88.00

Central Ohio.

While practically a new field, the Central Ohio is the one most attractive part of the high-grade petroleum fields at this time. While there is not as much development work under way as in some of the other fields, it is for the reason that the large expense attached to development work in the field keeps away the operator of small means and leaves the field entirely to the larger concerns. The first real excitement in the field was at Bremen and Junction City four years ago, when stock company after stock company was organized and stock sold to everyone who could raise the cash to pay for it. Less than 10 companies out of 375 stock concerns made good. Millions of dollars were lost by the investors. The close of 1910 showed that the chances were good for the finding of oil in other spots outside of Bremen and Junction City, and the result was that a wildcat well was drilled near New Straitsville, in the southwestern corner of Perry county, in the old coal fields, and developel into an oil well. Since then activity has grown from day to day, and the field branched over in Falls Gore township, Hocking county, and to-day close to 40 strings of drilling tolls are kept busily at work going down to the Clinton sand. So far fine results have been obtained from the Straitsville-Gore district, and the present year bids fair to see it among the most active. The wells are very good producers and show very good staying qualities.

While all this work was going on other people that were anxious to get into the game advanced still north of the Bremen field, where it was supposed that nothing but gas existed and found the crude in good quantities. The most important of the new fields outside the Straitsville-Gore regions is located in the southwestern corner of Muskingum county, and the southeastern corner of Licking county. In the last named field, which is located close to the town of Gratiot, the Columbus Gas and Fuel Company, early in the fall, drilled a test for gas on the McCracken farm, and found an oil producer that started at 70 barrels and maintained a daily output of 50 barrels. The second well has also been drilled in and is equally as godd if not better than the first venture. To the southeast across the county line in Muskingum county, the same company put down a purely wildcat well on the Johnson & Cone farm, and secured a 100-barrel producer, after which they went between the McCracken and Johnson ⅞ Cone farms, and sank a test on the Duncan farm, with the result that another 15-barrel producer was opened, after which they returned to the Johnson & Cone farm and drilled the second well, also getting a fine producer. A little north

of this development, in Hanover township, Licking county, the E. H. Everett Glass Company drilled wells on the Everett farm, and secured some small producers. Going north again in the northwestern corners of Muskingum county, near Frazeysburg, and across the county line in the northeast corner of Licking, good producers of oil were found, which encouraged the leasing not only of the acreage property alone, but every small tract has been picked up by the leaser. Just northeast a few miles from this last development a couple of fine oil wells have been drilled near West Carlisle, in the southwestern corner of Coshocton county, in Pike township also, in the southeastern corner of Knox county. Directly north across Knox county, in the southern part of Richland county, there was a little oil excitement at Butler a few years ago, but the finding of oil to the south then drew the attention away from the Butler field, which will no doubt receive its part of the new development during 1912. Still to the north an additional forty miles or more and just southeast of Oberlin, the college town in Lorain county, a small oil producing well was found and further tests are being made. To the east of the Oberlin well is Medina county where oil in good quantities was found during the year 1911, near Litchfield. Still east from the Medina field is Wayne county, where an oil well was found just before the close of the year about three miles south from Wooster, which stirred excitement in that quarter. In the suburbs of Cleveland, Cuyahoga county, at Newberg, since the finding of oil on the Brick Company's land, there have been additional wells started and much work has been accomplished in the way of leasing blocks of territory by oil men. This vast area covers a territory of about 125 miles north and south by about 50 miles east and west, and only a portion of the land has been tested. This is the most promising proposition for the oil men now east of the Mississippi, and the year 1912 should be an active one in oil to say nothing of the vast amount of gas development that will be kept going by the various large concerns furnishing light and fuel to the large cities of Ohio.

As a gas field, the Central Ohio field has no equal at this time anywhere in the country. Every test drilled in the large scope of land brings forth additional supply of the fuel. Among the many counties in which gas is being found in the Central Ohio field, Ashland is the greatest. But little work was done in this county previous to 1911, and its value as a gas producer was hardly known. Were it not for the many large gas gushers found in the county during the year there would surely be a shortage of the fuel. Monster gas wells were found.

The year 1911 closed in the Central Ohio field with 480 wells drilled in. Of this number 25 were oil producing wells, with a daily production of 603 barrels, 120 dry holes and 335 gas wells, with a total new output of 791,266,577 cubic feet of gas. The year's work was by months as follows:—

	Comp.	Oil.	Gas.	Dry.
January	49	1	37	11
February	39	5	28	6
March	38	1	20	17
April	17	..	11	6
May	30	..	19	11
June	36	1	23	12
July	40	2	27	11
August	21	..	13	8
September	44	4	35	5
October	56	3	43	10
November	64	5	49	10
December	46	3	30	13
Totals	480	25	335	120

The above wells produced oil and gas each month as follows:—

	Oil, barrels.	Gas, cubic feet.
January	35	76,643,400
February	138	55,050,000
March	15	45,250,000
April	..	23,250,000
May	..	44,163,940
June	10	47,980,000
July	10	69,700,000
August	..	43,253,490
September	55	66,065,000
October	60	100,760,000
November	150	113,175,000
December	130	105,975,747
Totals	603	791,266,577

The completed wells for the year by months in each county were as follows:—

County.	Comp.	Oil.	Gas.	Dry.
Licking	165	6	125	36
Ashland	100	..	88	12
Hocking	51	..	41	10
Knox	44	..	33	11
Fairfield	40	1	22	17
Muskingum	15	4	4	7
Medina	14	1	9	4
Perry	12	3	..	9
Coshocton	11	5	2	4
Wayne	6	1	2	3
Lorain	6	1	3	2
Vinton	4	2	1	1
Holmes	4	..	1	3
Richland	3	..	2	1
Cuyahoga	2	1	1	..
Erie	1	..	1	..
Delaware	1	..	..	1
Jackson	1	..	..	1
Totals	480	25	335	120

The oil and gas production from the above wells each month for the year by counties were as follows:—

County.	Oil prod. barrels.	Gas prod. cubic feet.
Licking	143	161,830,977
Ashland	..	413,200,200
Hocking	..	70,540,400
Knox	..	43,975,000
Fairfield	5	61,450,000
Muskingum	210	6,250,000
Medina	35	19,920,000
Perry	35	.....
Coshocton	90	3,000,000
Wayne	25	700,000
Lorain	10	5,500,000
Vinton	40	350,000
Holmes	..	500,000
Richland	..	3,000,000
Cuyahoga	10	1,000,000
Erie	..	100,000
Totals	603	791,266,577

Daily average oil wells, 24 3-25 barrels.
Daily average gas wells, 2,361,989 cubic feet.

The gas region of Central Ohio is without a doubt one of the best in the country and shows more real gas gushers than any other gas field. A gas gusher is a well that will produce from 2,000,000 cubic feet up daily. For the benefit of the readers a review of the gushers each month showing the farm, county, number of well and the output is given to show the phenomenal production of gas the companies have to draw from for an additional supply to their pipe lines.

JANUARY.

Licking County.—No. 1, Joe Bell farm, 2,000,000 cubic feet; No. 2, Abe Bovard farm, 2,000,000 feet; No. 1, M. McClelland farm, 3,500,000 feet; No. 1, C. McMullen farm, 3,000,000 feet; No. 3, Charles Hook farm, 2,000,000 feet; No. 1, I. Keller farm, 3,000,000 feet; No. 2, A. Gray farm, 2,000,000 feet, and No. 2, A. C. Sperry farm, 2,500,000 feet.

Fairfield County.—No. 1, J. Darling farm, 2,000,000 feet; No. 9, Darling farm, 5,000,000 feet; No. 1, John Gill farm, 3,000,000 feet; No. 2, J. Shafer farm, 6,500,000 feet, and No. 2, Wright farm, 2,500,000 feet.

Ashland County.—No. 1, M. Gourd farm, 9,700,000 feet.

Coshocton County.—No. 1, Mullett farm, 2,000,000 feet.

FEBRUARY.

Licking County.—No. 2, J. F. Cochran farm, 2,750,000 feet; No. 1, W. S. Kinney farm, 4,000,000 feet; No. 1, H. Bounds farm, 2,000,000 feet, and No. 1, F. Jones farm, 2,000,000 feet.

Fairfield County.—No. 2, P. Roshon farm, 7,000,000 feet; No. 1, M. Safford farm, 2,500,000 feet, and No. 1, Joseph Seitz farm, 4,000,000 feet.

Muskingum County.—No. 1, William Woodruff farm, 4,000,000 feet.

Medina County.—No. 1, E. C. Wilson farm, 5,000,000 feet.

MARCH.

Licking County.—No. 1, E. Harris farm, 2,500,000 feet and No. 2, I. Harris farm, 3,000,000 feet.

Fairfield County.—No. 2, Wertz farm, 2,000,000 feet; No. 1, Sarah Enson farm, 3,000,000 feet, and No. 1, Thomer farm, 6,000,000 feet.

Knox County.—No. 1, S. Dudley farm, 3,000,000 feet and No. 2, F. Baird farm, 2,000,000 feet.

Ashland County.—No. 1, I. D. Parker farm, 2,000,000 feet and No. 1, Gonyer farm, 9,500,000 feet.

APRIL.

Licking County.—No. 1, F. Harris farm, 2,000,000 feet; No. 2, E. Burkholder farm, 2,000,000 feet; Nos. 1 and 2, Charles Hook farm, 2,000,000 feet each.

Ashland County.—No. 2, Applegate farm, 6,000,000 feet; No. 1, Ferguson farm, 3,000,000 feet, and No. 1, Freer Estate, 2,000,000 feet.

MAY.

Licking County.—No. 2, G. Chopson farm, 2,000,000 feet and No. 3, G. Hook farm, 2,000,000 feet.

Hocking County.—No. 1, F. Conklin farm, 4,000,000 feet.

Ashland County.—No. 1, G. H. Ohl farm, 6,000,000 feet; No. 1, Schaller farm, 3,000,000 feet; No. 3, W. Shaller farm, 4,000,000 feet; No. 1, Shanks Bros. farm, 8,000,000 feet, and No. 1, Eliza Scott farm, 4,000,000 feet.

Medina County.—No. 1, P. Thompson farm, 2,500,000 feet.

JUNE.

Licking County.—No. 2, G. Holtman farm, 2,000,000 feet.

Hocking County.—No. 2, S. Kuhn farm, 2,000,000 feet.

Ashland County.—No. 1, S. Heckman farm, 9,000,000 feet; No. 1, L. R. Gongwer farm, 6,500,000 feet; No. 1, Henry Sheller farm, 10,780,000 feet; No. 1, F. Mohrman farm, 2,000,000 feet, and No. 1, Shambaugh farm, 3,000,000 feet.

JULY.

Licking County.—No. 1, G. Travernor farm, 2,000,000 feet.

Ashland County.—No. 1, J. J. Gongwer farm, 8,000,000 feet; No. 1, B. F. Bruker farm, 14,000,000 feet; No. 2, S. Shaller farm, 8,500,000 feet; No. 3, A. N. Boyer farm, 3,500,000 feet; No. 1, Ashland town lot, 7,500,000 feet, and No. 1, Foos farm, 5,000,000 feet.

AUGUST.

Licking County.—No. 1, T. Chambers farm, 2,500,000 feet.

Hocking County.—No. 1, W. Canfield farm, 4,000,000 feet.

Ashland County.—No. 2, W. M. Gours farm, 5,000,000 feet; No. 1, Allen Yeater farm, 11,000,000 feet; No. 1, D. Barr farm, 8,000,000 feet, and No. 1, I. D. Parker farm, 5,228,490 feet.

SEPTEMBER.

Licking County.—No. 1, H. B. Oldaker farm, 2,000,000 feet and No. 1, Dan Myers farm, 3,500,000 feet.

Knox County.—No. 1, J. Thompson farm, 4,000,000 feet.

Ashland County.—No. 1, B. F. Smith farm, 7,000,000 feet; No. 1, Julia Barr farm, 3,000,000 feet; No. 2, J. Kruger farm, 3,000,000 feet; No. 1, T. Elliott farm, 2,400,000 feet; No. 1, G. Dickey farm, 2,500,000 feet; No. 1, T. Thornburg farm, 3,000,000 feet; No. 1, F. Stone farm, 2,000,000 feet; No. 1, S. Scott farm, 5,165,000 feet, and No. 2, R. M. Smith farm, 2,000,000 feet.

OCTOBER.

Licking County.—No. 1, Harris farm, 3,500,000 feet.

Fairfield County.—No. 2, W. Watson farm, 2,200,000 feet.

Knox County.—No. 1, N. Bebout farm, 3,000,000 feet and No. 2, J. Thompson farm, 2,000,000 feet.

Hocking County.—No. 1, I. Quillen farm, 7,000,000 feet; No. 1, N. Clapper farm, 5,000,000 feet, and No. 1, L. Fox farm, 3,754,000 feet.

Ashland County.—No. 2, C. P. Vespey farm, 2,700,000 feet; No. 1, C. Wolfe farm, 5,000,000 feet; No. 2, J. Zehner farm, 6,000,000 feet; No. 2, G. Ohl farm, 5,500,000 feet; No. 1, F. Stamen farm, 8,200,000 feet; No. 1, W. Duff farm, 6,000,000 feet; No. 2, G. Dickey farm, 3,500,000 feet; No. 1, S. Carter farm, 5,500,000 feet; No. 1, S. Thornburg farm, 3,000,000 feet, and No. 1, L. Sater farm, 6,000,000 feet.

Medina County.—No. 1, C. E. Reynolds farm, 2,500,000 feet.

NOVEMBER.

Licking County.—No. 2, C. Hickey farm, 4,000,000 feet, and No. 4, Kate Davis farm, 2,000,000 feet.

Knox County.—No. 1, Gundlefinger farm, 2,100,000 feet.

Hocking County.—No. 1, I. Waltz farm, 2,000,000 feet, and No. 2, I. Quillen farm, 3,000,000 feet.

Ashland County.—No. 1, J. Stillwagon farm, 3,000,000 feet; No. 3, W. Gourd farm, 4,250,000 feet; No. 1, M. Stover farm, 9,000,000 feet; No. 2, A. Barr farm, 7,800,000 feet; No. 1, L. Markley farm, 5,500,000 feet; No. 1, D. Brubaker farm, 7,900,000 feet; No. 1, J. H. Baum farm, 8,400,000 feet; No. 1, F. M. Biddinger farm, 7,200,000 feet; No. 1, A. Young farm, 2,000,000 feet, and No. 1, D. Baum farm, 8,000,000 feet.

Medina County.—No. 1, M. D. Brogan farm, 6,000,000 feet.

DECEMBER.

Licking County.—No. 1, C. E. Harris farm, 2,698,977 feet; No. 1, Joe Davis farm, 3,000,000 feet.

Knox County.—No. 3, Mike Kelley farm, 2,000,000 feet; No. 1, M. Crow farm, 6,000,000 feet, and No. 1, Eli Vernon farm, 5,000,000 feet.

Hocking County.—No. 1, Baughan farm, 2,500,000 feet.

Ashland County.—No. 3, A. Barr farm, 5,500,000 feet; No. 2, B. Brubaker farm, 9,000,000 feet; No. 3, B. Brubaker farm, 7,000,000 feet; No. 2, J. H. Baum farm, 5,160,000 feet; No. 1, S. A. Berr farm, 5,618,190 feet; No. 1, M. Dilgard farm, 9,790,402 feet; No. 1, D. Sloan farm, 8,790,000 feet; No. 1, J. Kissell farm, 5,500,000 feet; No. 1, L. Demoss farm, 3,767,410 feet; No. 1, M. Kimmerman farm, 7,500,000 feet; No. 1, M. Cummings farm, 4,000,000 feet; No. 1, B. Anderson farm, 5,600,000 feet, and No. 1, T. Benton farm, 5,500,000 feet.

Recapitulation.

The following tables give the summary of the above gushers and production each month for 1911:—

Month.	No. of wells.	Gas prod., cubic feet.
January	15	50,700,000
February	9	33,250,000
March	9	33,000,000
April	7	19,000,000
May	9	35,500,000
June	7	35,280,000
July	6	50,500,000
August	6	35,728,490
September	12	49,565,000
October	18	81,350,000
November	16	82,150,000
December	21	103,925,747
Totals	135	609,949,237

Daily average for wells, 4,518,143 cubic feet.

The above wells were among the various counties, as follows:—

County.	No. of wells.	Gas prod., cubic feet.
Ashland	66	393,450,260
Licking	30	75,448,977
Fairfield	15	56,700,000
Hocking	9	33,250,000
Knox	9	20,100,000
Medina	4	16,000,000
Muskingum	1	4,000,000
Coshocton	1	2,000,000
Totals	135	609,949,237

The chronology of the year in gas shows that the largest gas gusher of the season was drilled in July, when the Ohio Fuel Supply Company drilled in their 14,000,000 cubic foot well on the B. Brubaker farm, in Ashland county. The next best gusher was the Logan Natural Gas and Fuel Company's well on the Allen Yeater farm, also in Ashland county, which produced 11,000,000 cubic feet and the same company is credited with the third largest well on the Henry Sheller farm, also in Ashland county, which produced 10,780,000 cubic feet. As a source of gas supply, Ashland county has made a wonderful record for 1911.

Lima Fields.

The Lima fields of Northwestern Ohio during the year 1911 showed no unusual activity, but now that the price of oil is going upward, new work may be started, especially in the older districts where there remains many undrilled locations. During the year there was a total of 527 wells completed, of which 32 were dry holes and 15 gas wells. The production of the oil wells totaled 6,381 barrels, less than the production of some of the single wells drilled in the early days of the field. The Lima fields, which were discovered years after the Pennsylvania field, were without a doubt the one field that made the oil industry what it is to-day. When first opened in 1884 the refiners were unable to solve the problem of the refining of the product on account of the sulphur that the oil contained and at that time it was considered worthless for anything but fuel oil, but a few years later a process was found and since then the field has been the most prominent one ever opened to the large and growing industry.

The past year shows but few extensions to the old producing area. The most important is the finding of oil at a much greater depth near Tiffin, in Seneca county. Heretofore the usual oil pay in that county was found at about 100 feet in the Trenton sand, but late developments made to the northeast of the producing field shows production as deep down as 650 feet in that formation, which makes the wells a depth of about 2,300 feet, or nearly as deep as the Clinton sands in Central Ohio. The deep wells are productive and hold their production well. The finding of this deep oil has renewed operations in a leasing way in that section of the Lima field and lease men are busy taking up territory and have been for a couple of months during the latter end of the year. The year also shows a slight western extension in the old Wood county district, in what was in the early days considered good for nothing but salt water. Oil was found at least two miles west of producing property and gives the trade some additional locations to operate upon the coming season. In the extreme western section of the field some new production in advance of present production were found in Mercer and Van Wert counties, also in Auglaize county, between Hume and Wapakonetta. Considerable leasing has been done to the south of the Trenton sand fields in Hardin, Columbiana and other counties, where the new year will show new developments.

But very few gushers were found in the Lima fields during the year. The total gushers were 10, with a production of 1,865 barrels. The first gusher of 1911 in the Northwestern Ohio or Lima field was drilled in February by the Sun Company in their No. 10, on the J. W. Moore farm, Clinton township, Seneca county, which produced 550 barrels.

In April the United Producers Company's No. 9, E. Fries farm, Plain township, Wood county, produced 100 barrels.

In July the Ohio Oil Company found a 150-barrel producer in No. 3 well on the A. Metzger farm, Oregon township, Lucas county.

In August the Ohio Oil Company's No. 21, M. Decker farm, Allen township, Hancock county, produced 140 barrels.

In October three gushers were drilled, The Ohio Oil Company's No. 4, A. Metzger farm, Oregon township, Lucas county, 150 barrels; Bacon & Co.'s No. 13, Toombs farm, Pleasants township, Seneca county, 100 barrels, and Jack Frost's No. 8, S. Mitchell farm, Plain township, Wood county, 225 barrels.

In November Watson & Reimund drilled a 100-barrel well in No. 19, W. Watson farm, Liberty township, Hancock county, and the Ohio Oil Company, one of the same capacity in No. 16, J. Taylor farm, Allen township, same county.

In December Jack Frost drilled his No. 9, S. Mitchell farm, Plain township, Wood county, and found a 250-barrel gusher, the best well of the year in the Lima districts.

There was an all around decrease in the work of 1911 when compared with the figures of 1910. There was a decrease of 55 in completed wells, 26 in dry holes and 367 barrels less production, the only increase being two in gas wells. There were 372 less wells abandoned during the year.

During the year 1911 the wells in the Lima fields of Northwestern Ohio were located by months as follows:—

Month.	Comp.	Prod.	Dry.	Gas.
January	45	408	2	2
February	48	599	4	1
March	40	323	1	1
April	40	483	..	2
May	44	460	4	1
June	48	550	5	1
July	42	498	4	..
August	46	630	3	2
September	50	470	..	2
October	44	793	2	1
November	47	465	4	1
December	33	593	2	1
Totals	527	6,381	32	15

These wells above were located in thirteen counties as follows:—

County.	Comp.	Prod.	Dry.	Gas.
Wood	191	2,836	9	3
Hancock	113	1,546	2	7
Sandusky	58	312	2	..
Seneca	44	341	8	1
Van Wert	24	369	1	..
Lucas	22	412	1	..
Allen	21	171	..	..
Auglaize	18	174	4	2
Ottawa	18	108	3	1
Mercer	12	60	2	1
Hardin	2	25	..	..
Wyandot	2	15	..	..
Putnam	2	12	..	..
Totals	527	6,381	32	15

The abandoned wells in the North-

western Ohio and Indiana fields each month for 1911 were as follows:—

NORTHWESTERN OHIO.

Month.	Abandoned.	Month.	Abandoned.
January	127	August	40
February	107	September	142
March	106	October	88
April	115	November	120
May	65	December	60
June	85		
July	78	Totals	1,142

The abandoned wells were located in counties as follows, for the year:—

INDIANA.

County	Abandoned.	County.	Abandoned.
Wood	368	Van Wert	26
Hancock	245	Seneca	21
Allen	208	Lucas	20
Sandusky	91	Ottawa	7
Auglaize	61	Shelby	4
Mercer	48		
Wyandot	43	Totals	1,142

The stocks of Northwestern Ohio oil have taken a big drop for 1911, due to the separation of the various companies that composed the Standard Oil Company, as much of the stocks held in the fields were changed around considerable. The stocks of Lima crude at the close of 1910 amounted to 5,467,277.10 barrels, and at the close of 1911 were but 3,251,671.34 barrels, a decline of 2,215,605.76 barrels. The total production of the field for 1911 was 3,397,576.24 barrels, and the deliveries were 6,130,983.27 barrels.

The runs and deliveries each month during 1911 were as follows:—

Month.	Runs. barrels.	Deliveries. barrels.
January	298,660.33	281,253.91
February	271,487.04	283,390.39
March	312,221.22	336,407.15
April	284,517.02	433,113.08
May	306,936.54	329,549.50
June	296,418.50	274,970.56
July	275,578.41	317,344.16
August	285,940.01	242,556.51
September	271,762.15	339,232.13
October	281,828.77	375,032.01
November	247,695.96	269,891.42
December	264,529.09	2,648,233.45
Totals	3,397,576.24	6,130,983.27
Monthly average	283,131.10	510,915.27
Daily average	9,437.71	17,030.51

Indiana.

Indiana, a portion of the old Trenton lime stone fields and at one time the most active oil field in the country to-day, has fallen into last place as far as completed work was done during 1911, of all the high-grade fields. This condition prevails on account of the scarcity of natural gas for fuel purposes, for without gas to furnish the required fuel the wells will not pay to pump.

The old eastern section of the State is about a thing of the past, and many of the old pumpers are being pulled out. Since the early excitement of 1890 there have been close to 45,000 wells drilled in the State, and often months during the boom days close to 400 wells were drilled in. Now the operator has nothing in sight to revive their production unless something is found in the southern section, or in the old heavy oil districts in the Kankakee Valley just southeast of Chicago, where several hundred wells were drilled some years ago.

But three wells in the gusher list were drilled in the Indiana field during the year, and all three were owned by Sidey & Roberts, on the A. H. Ratcliff farm, in Liberty township, Delaware county, in the Muncie district. They were all 100-barrel producers, and were Nos. 6, 7 and 9 on the lease.

There are possibilities yet in the southern section of Indiana for extensive oil pools, as but little of that part of the State has had any development work of any consequence. Near New Albany an abundance of natural gas is being found, and the prospects by additional drilling are good for oil at a shallower depth than the older fields of the State, as the Trenton sand raises to the south, and if oil was found it would only be in that one formation.

In February the Nixon Oil and Gas Company drilled in a 5,000,000 cubic feet gas well in the Oakland City field, in Patoka township, Pike county, and the gas is being utilized at Oakland City, where the company installed a pipe line.

J. A. Twichell and others found an extension to the Oakland City field, by drilling in a 20-barrel pumper on the Reed farm, a couple of miles northwest of developments.

In April, in Harrison township, Knox county, the Pure Oil Company drilled in another duster on the Ida Smith farm, in hunting for an oil pool. In Pigeon township, Warrick county, Fowler & Co. drilled a dry hole on the Elisha Barr land. In Washington township, Daviess county, Henry Risch found one of the dry kind on the Lodena Wright land, while in Greene county, near Lyons, the North American Oil Company's test on the McKee lands, produced five barrels.

In June the Portage Oil and Gas Company drilled in a wildcat well south of Vincennes, on the Barmes land, in Vincennes township, Knox county, and found some oil, and has prospects of a small pool. This company did not do any further work at the time, but has started another well and will drill several others the present season.

In November the Graham brothers made a plunge for gas in the Alfirdsville district, in the southeastern corner of Daviess county, and sunk 5 wells within a short period, finding 5 gas wells, that are good for 1,000,000 cubic feet each. This gas will be piped to Looggoottee, and used for heating and lighting purposes.

During the year 1911 there were 117 wells drilled in Indiana, of which 36 were dry holes and 8 gas wells. The new production amounted to 1,096 barrels. This is a decline from the 1910 figures of 148 wells completed, 7,569 barrels production, 31 dry holes and 8 gas wells. This is a heavy decline for any field.

The wells of Indiana during the year were completed by months as follows:—

Month.	Comp.	Prod.	Dry.	Gas.
January	14	142	4	..
February	10	53	3	1
March	10	129	1	..
April	8	73	3	..
May	8	66	2	..
June	10	77	2	1
July	11	107	5	..
August	11	155	4	..
September	8	75	2	1
October	6	85	2	..
November	15	62	4	5
December	6	82	..	..
Totals	117	1,096	35	8

In the completion of the above wells, Pike county, in Southwestern Indiana took the lead, with Wells, second; Delaware, third, and Jay county, fourth. They were divided by counties as follows:—

County.	Comp.	Prod.	Dry.	Gas.
Pike	40	439	11	2
Wells	17	181	..	..
Delaware	15	325	5	..
Jay	13	90	3	1
Knox	7	5	6	..
Daviess	7	..	2	5
Greene	5	15	2	..
Randolph	4	26	..	..
Madison	3	..	3	..
Adams	2	10	1	..
Blackford	2	5	..	..
Gibson	1	..	1	..
Warrick	1	..	1	..
Totals	117	1,096	35	8

During 1911 there were a total of 1,259 old wells abandoned in the Indiana field and were by months as follows:—

Month.	Abandoned.
January	62
February	21
March	114
April	31
May	233
June	118
July	141
August	122
September	79
October	137
November	160
December	41
Total	1,259

Of the above abandoned wells the larger number were located in Grant county, in what is known as the Marion district, with Wells county, or the Keystone district, second; Blackford county or the Montpelier district, third, and Delaware county or the Muncie district, fourth. These abandoned wells were by counties as follows:—

County.	Abandoned.
Grant	516
Wells	415
Blackford	116
Delaware	101
Jay	40
Huntington	40
Adams	17
Randolph	5
Total	1,259

The production of the Indiana petroleum fields has been steadily backward during the last year, as the production during 1911 only went a small number of barrels above the million barrel mark, while its usual production was close to 10,000,000 barrels. The deliveries for the year were better than nine million barrels, but this did not signify that the Indiana field produced this oil, as it was received in storage in that field and then moved on further East. The stocks of crude have dwindled down from the stocks on hand at the close of 1910, which were 849,134.66 barrels, while at the close of 1911 they were but 75,245.15 barrels, a decline of 773,889.51 barrels. The stocks in March and June were above the million barrel mark. The heavy decline in the stocks is due to the splitting up of the subsidary companies of the Standard Oil Company, and the stocks on hand are now the stocks of the Indiania Pipe Line Company exclusively.

The runs and deliveries from the Indiana field each month for 1911 were as follows:—

Month.	Runs barrels.	Deliveries barrels.
January	97,175.48	1,040,194.17
February	93,931.55	765,519.84
March	105,205.66	719,268.52
April	96,152.99	547,099.37
May	102,911.60	835,185.97
June	99,229.83	864,626.70
July	90,837.16	865,507.59
August	92,804.10	867,951.96
September	87,998.97	908,639.16
October	82,114.04	855,648.66
November	68,150.89	910,330.44
December	77,824.97	69,928.80
Totals	1,094,037.24	9,249,901.18
Monthly average	91,169.77	770,825.10
Daily average	3,038.99	25,694.17

Kentucky Fields.

The past year was a prosperous one in the petroleum districts of Kentucky and in results attained in both developed and new field operators have been unusually successful. The defined areas have undergone some changes during the past twelve months and some of the districts have been considerably widened. In a few instances once prolific pools have declined in production and have given place to newer extensions of the same districts. On the whole, however, the year stands out as one of success along several lines and operators have good cause for gratification over the showing and have been stimulated to try for better things during the ensuing year.

Development of newer districts constitutes a feature of the past year's showing. The prospects, as a result of new "wildcat" strikes, are more encouraging than for a number of years past for a wholesale widening of Kentucky's petroleum fields. The work of the prospectors in untried fields has revealed a number of new sources of production and in a few instances the success of advance drillers has been sufficiently encouraging to warrant the establishment of new lines of the Cumberland Pipe Line Company and at the close of the year several extensions were proposed in the eastern end of the State and will be built in the near future.

The center of activity showed little change, the lower districts of Kentucky continuing to supply the bulk of the State's production, but radiating from the centers of development work there was a systematic campaign looking to the widening of the productive areas and results along this line lead to a number of new openings for further operations. Most of this advance work was accomplished toward the close of the year, when advances in the price of crude oil encouraged the trade to try out leases which had long been held, but which they were not warranted in testing because of the prevailing low price of petroleum. In lower Kentucky some of the older pools were extended by this class of work and the work will assume much importance in these newer areas during the ensuing year. For two years past developments have been pretty closely confined to the proven spots, but as a result of the success of the initial ventures in outlying territory there has been an exodus to the new pools and the year will take precedence for its showing of wells of the wildcat variety.

Because of proximity of leases to the old fields and centers of drilling supplies, the lower Kentucky districts derived the greatest benefit at the beginning from the awakening of interest caused by the advancing market, but the scattered pools in other sections of the State came in for a share of the prospecting late in the year, and in the upper Kentucky developments there are some good prospects for extensions of the old pools as a result of the new work. The success attending some purely wildcat work in Eastern Kentucky, along the West Virginia border, is bringing about a period of development which bids fair to result in a new source of supply of high grade petroleum. A number of Western Kentucky counties and a string of counties bordering the Ohio River, in the northern part of the State, were centers of some test work during the year. A number of failures were listed, but results were sufficiently encouraging to assure a continuation of prospecting during the ensuing year. A number of counties bordering Tennessee also received a few punctures, and in a small area west of Wayne county the prospects are favorable for a new pool.

The completions recorded for the year by counties were as follows:—

County.	Comp.	Prod., bbls.	Dry.	Gas.
Wayne	121	1,729	27	..
Floyd	3	45	1	..
Wolfe	2	25	..	1
Muhlenberg	1	10	..	..
Logan	1	10	..	..
Hopkins	1	3	..	..
Boyd	1	..	1	..
Knott	1	..	1	..
Lawrence	1	..	1	..
Henderson	1	..	1	..
Breckenridge	1	..	..	1
Hancock	1	..	..	1
Ohio	1	..	1	..
Totals	136	1,822	33	3

The record for each month of the year was as follows:—

Month.	Comp.	Prod.	Dry.	Gas.
January	7	17	4	..
February	20	93	5	1
March	12	101	5	..
April	8	167	2	..
May	12	176	1	..
June	10	89	1	..
July	14	195	6	..
August	10	227	2	..
September	9	358	..	..
October	13	129	3	..
November	12	125	1	2
December	9	145	3	..
Totals	136	1,822	33	3

The center of operations during the year was in Wayne county, with its six divisions of Mt. Pisgah, Slickford, Stubensville, Elk Spring Valley, Cooper and Rock Creek. There was some shifting of the centers of production, the best results in this county coming from newer areas of comparatively recent development. The Rock Creek district was the center of much new work during the earlier part of the year and developed into one of the most prolific districts of the county. In this district a tide of capital was turned by the coming in of a number of wells doing 100 barrels and better each and the limits were considerably extended as a result of the widespread drilling campaign following the success of the initial wells. The field was gradually extended down toward the Tennessee line and some new territory of promise was opened for development the latter part of the year. A pipe line extension was built through this district some time ago, and it is now one of the most profitable pools in Wayne county. Among other interests which have been pusning its development is the producing branch of the Standard Oil Company, Pennsylvania and West Virginia operators have also come into the district, and the ensuing year promises to witness quite a lively drilling campaign, especially since the oil market has taken an upward trend.

The Mt. Pisgah pool is in the same direction as the Rock Creek field and has had its share of the new development work. A number of good-sized completions during the year brought this territory further into the limelight, and there was quite a substantial increase in operations, especially the work in the outlying portions of the field. The oil there has a heavy gas pressure behind it, and a number of the completions during 1911 were of the gushing variety.

The Stubensville pool, which at one time was the sensation of the Kentucky petroleum field, has hardly held its own during the past year, as newer districts have drawn much of its drilling force, and the old wells, which had been producing for a number of years, no longer held up to form. At the same time the pool had its share of the new work. This is one of the most thoroughly punctured areas in Wayne county, but during the past year, in the absence of new drillable territory close to the marketing lines, the old operators began drilling between old wells, and the showing from this work was more satisfactory than had been expected, with the result that the pool pretty well held its own in the matter of production. The Cooper and Slickford pools showed a decline in new work and production from old wells. The Cooper district yielded a number of wells of fair capacity, but no effort was made toward extending the productive area. The old gushing wells of Slickford have declined in output, and the completions there during the past year were of the small variety.

The test work carried on in Wayne county during the year was most thorough. The county contains a vast drillable area, with its six distinct fields, but until the past year little progress had been made in drilling beyond defined lines. With the excellent results of the past year to stimulate further search work, the prospects are very bright for Kentucky's leading oil-producing county to further take a lead in developments during the next year, and with some deep drilling in prospect, the indications are at this time that the year 1912 will be one of unusual activity. The shallow sands have been so thoroughly punctured by the drilling campaigns of the past eight years, that some attention is now being directed toward deep tests, and the next few months may furnish a few surprises in the way of deep sand developments.

Wayne county was the only county in lower Kentucky to furnish any features of interest during the past year. Three other counties, Cumberland, Knox and Whitley, include the established area, but outside of Whitley county, there was no production. Cumberland and Knox counties several years ago were among the leading producing fields of the State, but all the oil was struck in a shallow formation, and this has been exhausted. Knox county has probably furnished three hundred producers during the past eight years, and none of them is now at work. Some leases were taken up during the close of the year and some deep test work will probably be started early this year.

Cumberland county was the scene of a little deep test work during the closing month of the year, and at this time seems to be in line for some important deep test drilling. One well was recently finished up at a depth of 1,000 feet, and the showing is for a profitable producer. New York operators leased a considerable acreage during February, and arrangements were made for drilling a string of deep wells during this year. This county attracted attention several years ago by furnishing the largest oil strike ever made in Kentucky, a well making 500 barrels daily for several months. The production soon began to decline and it was speedily exhausted, after a few months' pumping. Operators who will conduct the new work believe that a deeper sand will reveal a more permanent supply and will bend their energies toward following up the recent strike.

West of Cumberland county a number of counties contiguous to Tennessee have been centres of a little prospecting during the past year. In Logan county quite an oil boom was started two years ago, but this field has failed so far to develop into anything very encouraging. A number of prospects have also been drilled in Warren county, and a profitable gas belt has been developed in that territory. Some testing for oil was started during the past year, but no strikes were made. In Muhlenberg and Hopkins county initial work was started during the past year, and the first ventures were successful. In both these counties, which are not far from the Tennessee line, and about a hundred miles west of the established fields of lower Kentucky, strikes were made in the first wells. A number of rigs were up toward the close of the

year, and with the encouraging finds already recorded, they give promise of turning out some new wells and furnishing a new source of supply.

Western Kentucky contains a vast area which looks good as a possible oil field, and operators are turning their attention toward it more and more. In the tier of counties composed of Muhlenberg, Hopkins, Logan and Warren the scattered drilling has revealed that oil exists in paying quantities, and, with the scarcity of desirable leases in the more developed portions of the older fields, the prospector will naturally turn his attention in that direction. For several months a leasing campaign has been under way in that territory, and a number of wells will be drilled during the next few months. These counties are remote from marketing facilities, and it will be a long time before developments assume importance enough to justify the establishment of a market, unless a rich territory, of more promise than at present shown, is developed.

The developed area of upper Kentucky has hardly held its own in the matter of production, and completed work during the past year. The high grade fields of Wolfe and Estill counties, and the shallow sand district of Bath and Rowan counties have slowly lost out in production, and during the year under review conditions were unfavorable for much new development work. Some little drilling was carried on in Wolfe county, but the other fields showed a dearth of activity. Wolfe county constitutes the deepest oil territory in the State. The wells are of only medium capacity, and the low price of oil has been a retarding factor in extending operations. The old pool has been pretty well drilled over and offers few new locations. One completion during the year showed a much better average production than former strikes, and this sole oiler will no doubt inspire further efforts when the winter season is over and field work in the rough, mountainous country is rendered more practicable. The old wells of the county have held their own in the matter of production, and give every evidence of being long lived. The oil is found at a depth of from 100 to 1,200 feet.

The shallow sand pool of Estill county has been the scene of little new work for three years. Oil is found at a depth of less than 300 feet, and they have proven of short life. No completions were made last year.

Some effort was made to revive the industry in the Bath and Rowan district during the year. Several rigs were planted for new tests, but no wells were finished up during the year. This field is known as the Ragland pool and produces a grade of petroleum different from the output of the other fields, it being a heavy grade and commanding a lower price. The territory has been defined by repeated tests in all directions and the inside area is well developed by the wells which have already been drilled. This territory has been the center of some deep drilling and operators expect to find the deep sand which has been proven to underlie the shallow formations in other developments of the State. No oil of the better grade has ever been found in the Bath-Rowan section, but no deep tests have yet been undertaken, efforts heretofore having been directed on the development of the shallow sands.

Greater progress was made in the development of the Big Sandy River country, in Eastern Kentucky, than during any other year since the industry was established in the State. Because of its proximity to the productive West Virginia fields operators have long regarded this territory as among the most promising in the State. Developments were started in Lawrence county early in the year, and were later extended to embrace several bordering counties. Several deep wells have been drilled in Lawrence county, and a good quantity of oil has been found at a depth of 1,100 feet. The strikes were made in a formation which is believed to be the berea grit, indicating an extension of the West Virginia sand into Kentucky. To date about sixteen tests have been drilled in Lawrence county, the majority of them showing a production of from 2 to 20 barrels each on a pumping test. Most of these developments took place the latter part of 1911, and the first month of this year and the pumping tests have not been carried on long enough to develop the lasting possibilities of the wells, but the depth at which oil is found is indicative of a permanent production.

The Cumberland Pipe Line Company, which furnishes an outlet for all Kentucky's oil production, has surveyed a branch pipe line to connect the principal development of Lawrence county with the main line, which passes through Eastern Kentucky into West Virginia. This line will be put in in the near future and will greatly stimulate further development in the territory reached. The area which will be served is seven miles in length, and tests have been pretty well scattered and furnish a pretty good line upon the possibilities of the region. At present some oil is transported by the tank car line, which was recently established.

The development of the Berea grit formation on the scale carried out in Lawrence county is one of the most encouraging of the results of the year 1911, and it is believed that the territory will be developed into a prolific oil field with the thorough development which will be carried out during the present year.

In addition to the test work conducted in Lawrence county, Boyd county, on the north, was subjected to two or three tests. The only finished well was abandoned as a failure, but others have shown good indications and are expected to prove producers.

For the first time in three years the old Whitehouse field in Floyd and Knott counties, Eastern Kentucky, was the center of new operations. A number of good strikes were made in the old Beaver Creek district of Floyd county, and a foundation made for new work, which will be carried on during the next twelve months. This is one of the earliest developed oil fields in the State and has had marketing facilities for the past seven years. At one time the grade of oil produced in the Whitehouse pool commanded Pennsylvania prices, but for the past several years it has been on the same commercial scale as the other light grade product of the State.

The development of counties bordering the Ohio River, in Northern Kentucky, started early in the year, and a number of test wells were drilled in Henderson, Breckenhidge, Hancock and further south in Ohio county. Several of these tests showed small quantities of oil, and all had good gas flows. Indiana and Illinois operators conducted the work, and acting on the theory that the Indiana formations might be proven to extend south into Kentucky, leased a large area from the Ohio River through a tier of counties and south toward the Tennessee line. Little progress marked this work as a whole last year, but developments are just being started on a large scale, and the ensuing year gives promise of greater activity in trying out this vast region. In nearly every test drilled thus far the prospects have been such as to justify a more thorough test of the Western and Northern Kentucky districts, and that the rich Indiana and Illinois formations may be proven to extend south into this State is the firm conviction of the men putting up the money for this class of prospecting.

A number of counties in the area under the test are rich in natural gas resources, one county, Meade, furnishing a sufficient production to supply a number of Ohio River towns. During the coming year the tests will be extended to this county, and Davies county, adjoining, has been leased over and will probably take a place in the list of counties to be drilled over during the next year. With the widespread developments in the fields north of the Ohio River there is little doubt but what the Kentucky counties which have been lined up by the tests during the past year will come in for a great deal of new test work. An area several hundred miles in extent, reaching from the Ohio River to the Tennessee border, has been gone over by lease takers, and rentals on most of the acreage have been kept up, indicating that those interested intend trying out their holdings.

In addition to the score or more counties which have been scenes of work during the past year, a number of counties in Central Kentucky give promise of doing something in oil production when tried out. Two tests have been made in Shelby county, and a showing of petroleum was developed in one. Several hundred acres have recently been leased in that county and drills will probably be put to work. In Morgan and Manifee counties much prospecting has been done for oil, and both these counties have extensive gas belts, proven by numerous test wells. Neither has been subjected to drilling tests during the past year.

The petroleum production of the State held its own pretty well during 1911, the greater part of the runs coming from the lower Kentucky districts, and the output being almost entirely of the better grade petroleum. The total yield for the year was slightly below half a million barrels, the figures showing little variation from the yield of the preceding year. The greater part of the production came from Wayne county pools, other counties furnishing a production, including Whitley, Wolfe, Bath, Rowan, Floyd and Lawrence.

Petroleum prices remained unchanged the greater part of the year, until near the close, the better grade commanding 72c. per barrel and the inferior grade 45c. per barrel. Two advances late in the year brought the better grade to 79c. per barrel, and the inferior grade to 48c. per barrel.

The first advance in Kentucky crude oil in nearly two years resulted in a direct awakening of the trade, and much of the new work which has been started came toward the close of the year, when the better price lead to renewed efforts at increasing production. Producers of small calibre, which were unprofitable while oil commanded 72c. per barrel and were abandoned, are being cleaned out and put to work, while operators who have proven territory are hastening to increase their production.

The indications are that the year 1912 will restore the State to its showing in petroleum production of five or six years ago, when the production exceeded 1,000,000 barrels yearly. Conditions for three or four years past have been unfavorable for developments, one of the principal reasons for a lull in operations being the low price of petroleum. At one time Kentucky oil commanded as much as $1.38 per barrel, but for the past three years the quotations have never reached the dollar mark. The advance of 7c. per barrel has already started many new rigs to moving, and when the spring season makes conditions for field work better there is expected to follow a general increase in activity along all lines. At no other time in the history of the industry in the State have there been so many good prospects in new directions, and the older operators have not been slow in arranging for increased activity during the coming season. Quite a number of new companies have been organized throughout the oil belt and the additional capital will do much toward further developing the petroleum resources of the new districts.

The field is pretty well supplied with marketing facilities by the extensions of the Cumberland Pipe Line Company, which reach from the West Virginia refineries to the Tennessee border and in two or three smaller districts off these lines tank cars are caring for the output. The additional extensions in the Big Sandy Valley, which, it is announced, will be put in at once, will connect with a market that promises to be a rich district, and the additional production already in sight will do much toward swelling the aggregate production.

On the Tennessee side the industry has been dead during the past year, with the exception of a little prospecting in the section remote from the old field, which was developed in Fentriss and Pickett counties. In the lower end of the State Tennessee operators have drilled a number of wells during the past year, and some gas has been developed. There is no commercial production of petroleum on the Tennessee side now and no new work is in sight for the districts bordering Kentucky, which furnished a large amount of oil ten years ago.

Deep drilling will doubtless be an important feature of operations in a number of Kentucky counties during the coming years. The shallow sands, found at depths of from 300 to 500 feet, have been found generally in all the districts which have furnished a regular production, but little is known of the deeper formation. The only production obtained below 1,000 feet is the limited output of Wolfe county, in the upper section of the State, and the newly developed district of Lawrence county, in Eastern Kentucky. If the formation developed in the latter district is the berea grit, and there is every evidence that it is, there is little reason why it cannot be generally developed over a large area of Eastern Kentucky, including the present shallow sand districts. Repeated tests in Lawrence county have revealed this sand at a uniform depth.

Just now the crude oil prices hardly warrant much deep drilling of a purely experimental nature, especially by the operators who have had their ups and downs with the Kentucky districts during the past few years. Ultimately, however, there are sure to be exhaustive searches for this deeper oil-producing formation, and it may give the State a high rank as a producer of petroleum in years to come. Operators at the beginning of the industry were bent on developing the shallow sands as much as possible and while high prices ruled gave little heed to what might underlie their shallow producers. Now that prices have declined about a fourth from the record prices during that time they have little inclination to prosecute a search for deep oil, but a few are making a beginning and the prospects are now better than ever before for a number of widely scattered tests.

Natural gas developments have been carried on as a distinct undertaking from petroleum operations in a number of Kentucky districts, and much capital is now invested in that industry. Fields of wide extent have been proven in Central, Eastern and Southern Kentucky, while companies have been engaged in drilling along the Kentucky-Tennesee line for natural gas during the past year.

The Central Kentucky natural gas field, centered in Menifee county, was established mainly by the Standard Oil Company. Probably a million dollars have been invested in developing the extensive gas belts in that region and running pipe lines to Central Kentucky cities. No oil has ever been found in Menifee county. A natural gas belt of considerable extent has also been developed in Eastern Kentucky, in Martin county, and it has received renewed attention during the past year.

Illinois Fields.

The year of 1911 in the Illinois petroleum field showed a heavy falling off in completed work when compared with previous years, but at the same time the season was a most prosperous one for the trade, as a steady market prevailed throughout the year, and the wells as a majority being fairly good producers, made up for the lack of work completed. The year brought forth an important new find when the Carlyle pool, in Wade township, Clinton country, and midway between the old producing fields in Clark, Crawford and Lawrence counties and the Mississippi River was opened. This is the one important pool developed outside the old territory, although the Sandoval pool, in Marion county, about fifteen miles east from the Carlyle pool, was a product of 1910 and was quite productive, but nothing like the Carlyle pool. The Carlyle pool was practically opened during April, when a 500-barrel gusher was drilled on the Murphy farm, and it is to this gusher that the great activity prevailed in the pool. The pool covers an area of leases of more than a thousand acres all told, and those that were lucky enough to hold inside territory were big winners, while those who drilled in surrounding townships failed to find anything worth while, and the Carlyle pool now remains a monument to that county. During the year there was a total of 172 wells drilled in Clinton county, of which 49 were total failures, the balance being good average producers. The total of the producing wells during their first 24 hours run amounted to 11,581 barrels, and the pool had a daily production handled by pipe lines close to 5,000 barrels. The pool is now pretty well drilled over, and before the close of a few months there will be no locations left. So many failures have been drilled around the pool, that there is no chance to find an extension to the pool, which will probably go backward in its daily average production at a rapid rate, owing to the drilling of wells so close together.

The Illinois field assumed its first importance early in 1905, but little development work had been done over the State previously. Formerly some test work had been done in Clark county, north of Casey, which was back in the early '60's, and about twenty-five years ago some work was done around Litchfield, in Montgomery county, near Sparta, in Randolph county, and in Pike county, to the north of St. Louis. The real worth of the Illinois oil field was not known to the world until 1906, when operations first started in the shallow fields with a grand rush. In that year a total of 3,283 wells were drilled, with 472 dry holes and gas wells. During 1907 there were 4,988 wells completed, with 737 dry holes and gas wells. In 1908 a total of 3,574 wells and 565 dry holes and gas wells were finished, while in 1909 there were 3,151 wells drilled, with 558 dry holes and gas wells. The year 1910 shows that 2,949 wells were finished, of which 462 were dry holes and gas wells, but 1911 only shows 1,365 wells finished, with 305 dry holes and gas wells. As near as figures can show since development work was first started in Illinois, there has been a total of 20,254 wells completed, of which 3,128 were either dry holes or gas wells. This number includes all wells to the close of 1911. The runs of crude from the State have been as high as 100,000 barrels a day, but have declined to less than 80,000 barrels, with all the new drilling that has been accomplished. Were it not for the deep sand fields of Lawrence county, and its good staying qualities the State would not show a production of 40,000 barrels, as the wells in Crawford, Clark, Coles, Edgar and other producing counties have gone to rather small producers compared with their early capacity.

Outside of the main producing counties during the year, oil was found in but five different counties and that in such small quantities that no excitement was caused over the finds. Jasper, Coles, Morgan and Macoupin counties were the spots.

The leading field for the new year will be the deep sand district in Lawrance county, where many more wells can be drilled on a small acreage than in any of the other counties, due to the fact that eight distinct producing sands are found, and when drilled shallow or deep, one well's output does not interfere with another, as they draw from different formations. Crawford and Clark counties, the two oldest producing sections, are about drilled over and if the trade expects to retain Illinois in the producing list for any long period, they will have to open some new fields.

During 1911 the wells in the Illinois field were drilled, in months, as follows:—

Month.	Comp.	Prod.	Dry.	Gas.
January	105	5,677	16	7
February	89	3,512	16	9
March	70	3,909	10	4
April	81	5,587	13	3
May	117	5,132	31	2
June	147	5,850	37	6
July	127	9,058	24	2
August	150	7,535	26	2
September	135	6,551	34	2
October	107	4,782	16	1
November	129	5,826	23	2
December	108	3,432	18	..
Totals	1,365	66,851	264	40

These above wells were scattered over the various counties, as follows:—

County.	Comp.	Prod.	Dry.	Gas.
Lawrence	523	40,432	38	19
Crawford	481	9,802	93	19
Clinton	172	11,681	49	..
Clark	72	771	25	2
Marion	55	4,025	11	..
Cumberland	13	100	7	..
Morgan	11	3	10	..
Bond	10	..	9	7
Jasper	5	20	2	..
Perry	4	..	4	..
Washington	3	..	3	..
Coles	2	10	..	..
Macoupin	2	7	..	..
Montgomery	2	..	2	..
Fayette	2	..	2	..
St. Clair	2	..	2	..
Wabash	1	..	1	..
Gallatin	1	..	1	..
Edgar	1	..	1	..
Alexandria	1	..	1	..
Clay	1	..	1	..
Madison	1	..	1	..
Totals	1,365	66,851	264	40

The abandoned wells for 1911 in the Illonis field were as follows:—

County.	Abandoned.
Clark	95
Crawford	89
Lawrence	19
Coles	3
Clinton	1
Total	198

During 1911 the total runs of oil from the Illinois field by the Ohio Oil Company's lines amounted to 26,529,416.37 barrels, and the deliveries for the same period were 14,122,344.12 barrels. The runs from the wells and the deliveries each month for the year were as follows:—

	Runs, Barrels.	Deliveries, Barrels
January	2,169,878.48	938,860.48
February	1,994,231.42	838,565.73
March	2,589,634.97	1,218,111.33
April	2,173,939.43	1,022,936.26
May	2,299,881.16	1,132,231.25
June	2,208,358.29	1,174,211.17
July	2,292,926.66	1,231,534.42
August	2,340,877.21	1,206,244.36
September	2,179,591.49	1,252,987.72
October	2,195,407.56	1,352,605.31
November	1,996,321.16	1,304,662.46
December	2,088,368.54	1,454,393.63
Total	26,529,416.37	14,122,344.12
T. W. pipe line	218,328.36	349,830.75
Other lines	2,290,000.00	2,290,000.00
Grand total	29,037,744.73	16,762,174.87
Monthly average	2,419,812.06	1,396,847.91
Daily average	80,660.40	46,561,62

The stocks of Illinois oil have depreciated at an alarming rate during the last twelve months, having gone from 26,243,014.79 barrels at the close of December, 1910, to 19,131,677.63 barrels at the close of December, 1911, or a decline of 7,111,337,16 barrels in twelve months. This heavy decrease from the largest oil field east of the Mississippi River, was an incentive for advances in the price of the crude product which came just before the close of the year.

THE YEAR'S GUSHERS.

Illinois was not so prolific in wells of the gusher type during 1911 as was the case in the previous four years, or since the deep sand fields of Lawrence county came into prominence. The largest gusher of the year was a McCloskey sand producer, which was No. 16 on the A. Vandermark farm, in Dennison township, Lawrence county, with a production of 1,800 barrels. One of equal capacity was drilled in the Carlyle field, in Clinton county, in No. 6, Murphy farm. The G. L. Ryan farm, in Dennison township, Lawrence county, also furnished two large gushers during July. No. 13 on that farm produced 1,000 barrels and No. 15 produced 1,650 barrels.

The Illinois gushers were completed by months, counties and farms, during the year:—

JANUARY.

Crawford County.—No. 7, Shoemaker farm, 190 barrels; No. 14, C. Wekeman farm, 170 barrels; No. 15, same farm, 180 barrels; Nos. 19 and 20, J. S. Kirk farm, 100 barrels each; No. 6, T. Geffs farm, 100 barrels, and No. 5, P. J. Garard farm, 100 barrels. Total, 7 wells, 940 barrels.

Lawrence County.—No. 19, T. I. Gould farm, 200 barrels; No. 11, S. J. Gee farm, 135 barrels; No. 12, L. J. Jenners farm, 125 barrels; No. 9, McCloskey farm, 700 barrels; No. 10, S. L. Gray farm, 380 barrels; No. 11, same farm, 165 barrels; No. 3, T. Smith farm, 500 barrels; No. 4, H. Hardacre farm, 180 barrels; No. 13, J. Madding farm, 165 barrels; No. 14, same farm, 125 barrels; No. 9, Baltzell farm, 150 barrels; No. 6, C. Willey farm, 150 barrels; No. 6, L. Dulaney farm, 335 barrels; No. 24, J. Kimmell farm, 250 barrels, and No. 14, Ella Burns farm, 500 barrels. Total, 15 wells and 4,060 barrels.

Marion County.—No. 3, A Benoist farm, 150 barrels; No. 2, Gunyon farm, 200 barrels, and No. 4, B. Warfield farm, 200 barrels. Total wells, 3; production, 550 barrels.

FEBRUARY.

Crawford County.—No. 9, J. G. Apple farm, 200 barrels; No. 11, W. A. Alexander farm, 200 barrels; No. 2, T. Geffs farm, 100 barrels; No. 7, S. Payne farm, 180 barrels; No. 30, J. Payne farm, 120 barrels, and No. 9, S. Smith farm, 120 barrels. Total wells, 6; production, 920 barrels.

Lawrence County.—No. 15, A. Vandermark farm, 100 barrels; No. 9, W. Snyder farm, 225 barrels; No. 5, S. Gillespie farm, 200 barrels; No. 2, R. M. Kirkwood farm, 200 barrels; No. 2, H. Regal farm, 200 barrels; No. 27, W. Crackle farm, 100 barrels; No. 15, W. Pemberton farm, 120 barrels; No. 12, J. Klinger farm, 135 barrels; No. 13, G. Cooper farm, 150 barrels, and No. 16, G. Clark farm, 175 barrels. Total wells, 10; production, 1,665 barrels.

Marion County.—No. 4, Benoist farm, 200 barrels; No. 2, F. Snaffnit farm, 200 barrels; No. 1, J. Bohner farm, 200 barrels, and No. 2, H. Bohner farm, 100 barrels. Total wells, 4; production, 700 barrels.

MARCH.

Crawford County.—No. 10, J. G. Apple farm, 170 barrels; No. 12, J. Payne farm, 600 barrels; No. 31, John Payne farm, 100 barrels, and No. 8, S. J. Payne farm, 180 barrels. Total wells, 4; production, 1,650 barrels.

Lawrence County.—No. 1, I. Buchanan farm, 100 barrels; No. 1, T. Taylor farm, 100 barrels; No. 1, H. Hardacre farm, 100 barrels; No. 7, Perry King farm, 160 barrels; No. 8, Ross heirs' farm, 180 barrels; No. 18, W. Rogers farm, 200 barrels; No. 5, McCleave farm, 150 barrels, and No. 38, Thorn farm, 200 barrels. Total wells, 8; production, 1,190 barrels.

Marion County.—No. 4, E. Benoist farm, 200 barrels; No. 2, B. Warfield farm, 150 barrels; No. 3, B. Warfield farm, 200 barrels; No. 3, C. B. Warfield farm, 200 barrels; No. 4, B. C. Warfield farm, 150 barrels, and No. 3, F. Gunyon farm, 100 barrels. Total wells, 6; production, 1,000 barrels.

APRIL.

Clark County.—No. 2, Hannah Cooley farm, 250 barrels, and No. 8, G. Orrel farm, 100 barrels. Total wells, 2; production, 350 barrels.

Crawford County.—No. 8, M. Shiltz farm, 160 barrels; No. 4, Murphy farm, 180 barrels; No. 5, same farm, 320 barrels; No. 7, S. Smith farm, 135 barrels; No. 14, J. Payne farm, 300 barrels, and No. 15, same farm, 150 barrels. Total wells, 6; production, 1,245 barrels.

Lawrence County.—No. 13, G. L. Ryan, 1,250 barrels; No. 14, same farm, 1,400 barrels; No. 13, S. L. Gray farm, 200 barrels; No. 5, Robt. Irwin farm, 155 barrels; No. 3, R. M. Kirkwood farm, 200 barrels; No. 5, M. E. Stoltz farm, 100 barrels; No. 45, Perry King farm, 100 barrels; No. 2, I. B. Smith farm, 115 barrels; No. 15, J. D. Madding farm, 130 barrels; No. 46, Perry King farm, 135 barrels; No. 16, R. L. Fitch farm, 400 barrels; No. 17 W. H. Pemberton farm, 160 barrels; No. 26, J. L. Kimmell farm, 100 barrels, and No. 27 same farm, 150 barrels. Total wells, 15, production 4,695 barrels.

Marion County.—No. 5, A. Benoist farm, 100 barrels.

Clinton County.—No. 1, Maria Smith farm, 200 barrels, and No. 1, Peter Murphy farm, 500 barrels. Total wells, 2; production, 700 barrels.

MAY.

Crawford County.—No. 14, F. Coudry farm, 130 barrels; No. 6, J. Murphy farm, 300 barrels; No. 7, same farm, 240 barrels; No. 24, J. W. Darrough farm, 200 barrels; No. 8, Sue Smith farm, 200 barrels, and No. 14, S. C. Bowman farm, 156 barrels. Total wells, 6; production, 1,226 barrels.

Lawrence County.—No. 20, T. I. Gould farm, 100 barrels; No. 11, A. B. Buchannan farm, 250 barrels; No. 9, Theo. Leighty farm, 300 barrels; No. 13, A. B. Buchannan farm, 250 barrels; No. 16 Laura Gillespie farm, 130 barrels; No. 4, E. Leighty farm, 100 barrels; No. 2, S. J. Gee farm, 210 barrels; No. 2, F. S. Ketterman farm, 100 barrels; No. 13, C. Stallings farm, 300 barrels; No. 18, Wm. Crump farm, 150 barrels; No. 2, A. S. Waggoner farm, 150 barrels; No. 17, R. L. Fitch farm, 375 barrels, and No. 20, W. C. Miller farm, 115 barrels. Total wells, 13; production, 2,530 barrels.

Marion County.—No. 6, A. Benoist farm, 100 barrels.

Clinton County.—No. 2, P. Murphy farm, 100 barrels, and No. 1, H. J. Schafley farm, 700 barrels. Total wells, 2; production, 800 barrels.

JUNE.

Crawford County.—No. 25, J. W. Darrough farm, 125 barrels; No. 24, J. J. McKnight farm, 150 barrels; No. 16, F. Coudry farm, 125 barrels; No. 9, M. Schiltz farm, 317 barrels; No. 33, M. Payne farm, 100 barrels; No. 2, G. W. Freeland farm, 300 barrels; No. 26, S. M. Fitch farm, 150 barrels; No. 7, J. M. Creswell farm, 125 barrels, and No. 1, P. E. Houts farm, 210 barrels. Total wells, 10; production, 1,752 barrels.

Lawrence County.—No. 18, L. J. Jenners farm, 170 barrels; No. 2, school lot, 300 barrels; No. 7, V. Christensen farm, 325 barrels; No. 6, J. A. Seed farm, 175 barrels; No. 4, Thos Smith farm, 250 barrels; No. 3, H. Hardacre farm, 150 barrels; No. 10, R. M. Kirkwood farm, 100 barrels; No. 3; Scott Gray farm, 100 barrels; No. 28, Wm. Crackle farm, 200 barrels; No. 8, E. Dalrymple farm, 125 barrels; No. 2, school land, 125 barrels; No. 18, R. L. Fitch farm, 200 barrels; No. 19, W. H. Pemberton farm 100 barrels; No. 19, R. L. Fitch farm, 125 barrels; No. 11, O. Baltzell farm, 150 barrels, and No. 40, W. E. Finlay farm, 100 barrels. Total wells, 16; production 2,695 barrels.

Clinton County.—No. 2, Karhoff farm, 100 barrels; No. 1, Leo Dieter farm, 150 barrels; No. 2, Maria Smith farm, 200 barrels; No. 3, same farm, 125 barrels; No. 1, A. Hempen farm, 200 barrels; No. 3, P. Murphy farm, 150 barrels; No. 2, H. Schaffey farm, 150 barrels, and No. 1, W. McCabe farm, 250 barrels. Total wells, 8; production, 1,325 barrels.

JULY.

Crawford County.—No. 11, Jas Murphy farm, 350 barrels; No. 10, Jas. Murphy farm, 100 barrels; No. 1, J. P. Seager farm, 100 barrels; No. 8, S. D. Swan farm, 100 barrels. Total wells, 4; production, 650 barrels.

Lawrence County.—No. 16, A. Vandermark farm, 1,800 barrels; No. 15, G. L. Ryan farm, 1,000 barrels; No. 16, same farm, 1,650 barrels; No. 17, L. Gillespie farm, 300 barrels; No. 8, V. Christensen farm, 125 barrels; No. 1, Roy Summers farm, 150 barrels; No. 4, R. Kirkwood farm, 125 barrels; No. 1, T. Whittaker farm, 125 barrels; No. 8, P. King farm, 160 barrels; No. 9, same farm, 150 barrels; No. 13, J. H. Klinger farm, 175 barrels; No. 13, O. Baltzell farm, 250 barrels; No. 21, W. C. Miller farm, 100 barrels; No. 19, W. Robbins farm, 180 barrels, and No. 16, J. M. Buchannan farm, 100 barrels. Total wells, 15; production, 6,390 barrels.

Marion County.—No. 3, John Bohner farm, 100 barrels.

Clinton County.—No. 3, A. Hempen farm, 100 barrels; No. 4, same farm, 100 barrels; No. 5, P. Murphy farm, 300 barrels; No. 6, same farm, 1,800 barrels; No. 3, H. Schafley farm, 150 barrels; No. 4, same farm, 150 barrels; No. 1, B. Schumaker farm, 500 barrels; No. 4, M. Smith farm, 175 barrels; No. 1, Henry Wilkin farm, 150 barrels; No. 1, J. Diepenbrock farm, 150 barrels. Total wells, 10; production, 3,575 barrels.

AUGUST.

Clark County.—No. 37, L. Wagner farm, 175 barrels.

Crawford County.—No. 16, E. Reed farm, 155 barrels, and No. 1, K. Weeks farm, 100 barrels.

Lawrence County.—No. 19, L. K. Leighty farm, 520 barrels; No 5, D Withers farm, 100 barrels; No. 11, P. Moore farm, 150 barrels; No. 5, R. Kirkwood farm, 100 barrels; No. 4, Hardacre farm, 125 barrels; No. 5, F. F. Middagh farm, 200 barrels; No. 4, J. W. Bolles farm, 165 barrels; No. 1, S. Kimmell farm, 125 barrels; No. 2, same farm, 200 barrels; No. 13, L. D. Sutton farm, 150 barrels; No. 7, W. E. Updike farm, 450 barrels; No. 9, T. Coombs farm, 100 barrels; No. 10, same farm, 100 barrels; No. 2, E. Lester farm, 100 barrels, and No. 9, J. D. Bowers farm, 100 barrels. Total wells, 15; production, 2,685 barrels.

Clinton County.—No. 6, A. Hempen farm, 100 barrels; No. 7, P. Murphy farm, 100 barrels; No. 1, Deiter farm, 150 barrels; No. 2, Deiter farm, 100 barrels; No. 6, H. Schafley farm, 250 barrels; No. 1, Schwerorjohn farm, 125 barrels; No. 1, Diepenbrock No. 2 farm, 150 barrels; No. 1, Hempen farm, 100 barrels; No. 2, Leo. Deiter farm, 150 barrels; No. 3, same farm, 125 barrels; No. 4, same farm, 150 barrels; No. 5, same farm, 100 barrels; No. 7, same farm, 100 barrels; No. 4, A. Karhoff farm, 100 barrels, and No. 9, M. Smith farm, 125 barrels. Total wells, 15; production, 1,925 barrels.

SEPTEMBER.

Crawford County.—No. 11, M. Shiltz farm, 100 barrels, and No. 43, Woodworth farm, 175 barrels.

Lawrence County.—No. 17, G. L. Ryan, farm, 600 barrels; No. 16, P. Leighty farm, 200 barrels; No. 4, J. J. Gould farm, 100 barrels; No. 2, School lot, 150 barrels; No. 12, Jenners farm, 125 barrels; No. 19, L. Gillespie farm, 300 barrels; No. 12, S. Lewis farm, 100 barrels; No. 8, J. Griggs farm, 150 barrels; No. 2, H. Tanguary farm, 225 barrels; No. 2, T. Whittaker farm, 100 barrels; No. 5, Hardacre farm, 150 barrels; No. 3, M. E. Ridgeley farm, 300 barrels; No. 3, G. Racop farm, 100 barrels; No. 2, N. Devonshire farm, 220 barrels; No. 14, G. Cooper farm, 200 barrels; No. 8, N. J. Updike farm, 200 barrels, and No. 1, W. E. Claycomb farm, 165 barrels. Total wells, 17; production, 3,335 barrels.

Marion County.—No. 8, A. Benoist farm, 100 barrels.

Clinton County.—No. 2, Shumaker farm, 500 barrels; No. 2, McCabe farm, 200 barrels; No. 3, Shumaker farm, 400 barrels; No. 4, same farm, 300 barrels; No. 2, Antone Hempen farm, 100 barrels; No. 9, Leo. Deiter farm, 250 barrels, and No. 3, J. Diepenbrock farm, 125 barrels. Total wells, 7; production, 1,875 barrels.

OCTOBER.

Clark County.—No. 39, L. Weaver farm, 150 barrels.

Crawford County.—No. 12, M. Shiltz farm, 250 barrels; No. 15, Jos. Yarger farm, 100 barrels, and No. 9, W. Ewing farm, 150 barrels. Total wells, 3; production, 500 barrels.

Lawrence County.—No. 9, S. Gray farm, 125 barrels; No. 2, T. H. Seed farm, 135 barrels; No. 12, P. Moore farm, 125 barrels; No. 7, R. M. Kirkwood farm, 120 barrels; No. 4, T. Whittaker farm, 100 barrels; No. 9, T. C. Whittaker farm, 100 barrels; No. 6, H. Hardacre farm, 120 barrels; No. 3, T. Whittaker No. 2 farm, 120 barrels; No. 23, Jos. Lewis farm, 100 barrels; No. 6, D. B. Stoltz farm, 350 barrels; No. 10, William Ross farm, 130 barrels; No. 10, T. C. Coombs farm, 125 barrels; No. 10, N. J. Updike farm, 300 barrels; No. 22, W. Miller farm, 100 barrels, and No. 1, Piper lot, 150 barrels. Total wells, 16; production, 2,300 barrels.

Clinton County.—No. 6, Leo. Deiter farm, 125 barrels; No. 7, same farm, 175 barrels; No. 3, McCabe farm, 200 barrels; No. 5, Shumaker farm, 200 barrels; No. 4, J. Diepenbrock farm, 175 barrels; No. 5, same farm, 125 barrels; No. 2, L. Deiter farm, 250 barrels; No. 3, same farm, 200 barrels, and No. 1, J. Diepenbrock No. 2 farm, 125 barrels. Total wells, 9; production, 1,575 barrels.

NOVEMBER.

Crawford County.—No. 14, M. Shiltz farm, 100 barrels; No. 10, M. Shiltz No. 2 farm, 200 barrels; No. 12, W. J. Ikmire farm, 150 barrels; No. 4, G. W. Freeland farm, 100 barrels, and No. 1, A. Livingstone farm, 100 barrels. Total wells, 5; production, 650 barrels.

Lawrence County.—No. 5, J. J. Gould farm, 225 barrels; No. 6, D. Withers farm, 125 barrels; No. 25, T. P. Gillespie farm, 425 barrels; No. 1, R. T. Gillespie farm, 125 barrels; No. 13, C. E. Buchannan farm, 625 barrels; No. 12, F. C. Whittaker farm, 100 barrels; No. 24, J. B. Lewis farm, 110 barrels; No. 2, J. M. Roderick farm, 210 barrels; No. 3, same farm, 100 barrels; No. 1, O. R. Wright, farm, 140 barrels; No. 7, W. Westall farm, 165 barrels; No. 5, S. Ketterman farm, 120 barrels; No. 4, H. S. Poland farm, 110 barrels; No. 12, M. Piper farm, 200 barrels; No. 1, N. Updike farm, 130 barrels; No. 13, M. Piper farm, 120 barrels, and No. 9, Joseph Lewis farm, 210 barrels. Total wells, 18; production, 3,390 barrels.

Marion County.—No. 5, F. M. Gunyon farm, 100 barrels.

Clinton County.—No. 6, B. Shumaker farm, 150 barrels; No. 4, J. Diepenbrock farm, 100 barrels; No. 6, same farm, 125 barrels; No. 7, same farm, 100 barrels; No. 4, L. Deiter farm, 100 barrels; No. 5, same farm, 100 barrels; No. 6, same farm, 100 barrels, and No. 7, same farm, 125 barrels. Total wells, 8; production, 900 barrels.

DECEMBER.

Crawford County.—No. 10, M. Shiltz farm, 200 barrels, and No. 2, A. Sibley farm, 155 barrels.

Lawrence County.—No. 18, P. Leighty farm, 125 barrels; No. 21, T. I. Gould farm, 100 barrels; No. 26, T. P. Gillespie farm, 110 barrels; No. 26, O. Smith farm, 100 barrels; No. 12, N. Updike farm, 125 barrels, and No. 1, Abernathy lot, 160 barrels. Total wells, 6; production, 710 barrels.

Clinton County.—No. 8, Deiter farm, 150 barrels; No. 8, Deiter farm, 100 barrels; No. 11, same farm, 125 barrels; No. 7, B. Shumaker farm, 125 barrels, and No. 8, same farm, 150 barrels. To tale wells, 5; production, 650 barrels.

RECAPITULATION.

The following table shows the number of gushers and their production each month for 1911 in the Illinois field:—

Month.	No. of Wells.	Prod., Barrels.
January	25	5,550
February	20	3,225
March	18	3,240
April	26	7,090
May	22	4,656
June	34	5,772
July	30	10,715
August	33	5,040
September	27	5,585
October	29	4,525
November	32	5,040
December	13	1,715
Total	309	62,153

The above wells were distributed by counties as follows:—

Month.	No. of Wells.	Prod., Barrels.
Crawford	57	9,818
Lawrence	164	35,585
Marion	18	2,750
Clinton	66	13,325
Clark	4	675
Total	309	62,153

MID-CONTINENT FIELDS.

The total output of the mid-continent field in 1911 was 59,332,850 barrels, bringing the production of the field to date to the enormous amount of 297,056,882 barrels. All of this has been consumed, save 50,822,177.57 barrels, now held in storage as reserve stocks. The production of 1911 exceeded that of 1910 by 5,893,537 barrels, and was the high record year of the field. It is doubtful if this record will ever again be reached in Oklahoma and Kansas. Over 3,000,000 barrels of the 1911 figures were taken from producers' field stocks and represented oil pumped in former years and stored in tanks. Producers now hold only 958,150 barrels in tanks, so that in the coming years the supply, so far as statistics go, must come from the wells and not from storage tanks of producers. On January 1, 1909, the producers held practically 10,000,000 barrels of oil in wood and iron tanks. This has almost disappeared. A great deal of that disposed of last year found its way to the markets through the independent agencies.

With the average production per well in the entire field only seven barrels, with the famous shallow sand district out of the running so far as new developments is concerned, hundreds of its wells doing half or less than half a barrel a day, with new pools, such as the Osage, developing a production of 26,000 barrels a day and dropping back to 6,000 or 7,000 barrels a day, all within nine or ten months, with hundreds of wildcat wells failing to find rich new pools, and with the

output of the field rapidly declining, one cannot but ask:—"What of the future?"

There seems to be but one answer:—"Less oil, higher price."

The Prairie Oil and Gas Company's reports show that it took into its lines last year 34,671,780 barrels of oil, making a total of 204,660,458 barrels of mid-continent crude the Prairie has handled. Of this amount it still holds as reserve stock 41,512,202.57 barrels. In spite of the fact the Prairie drew upon its reserve supply during seven months of last year, it actually increased its stocks in 1911 1,237,058.77 barrels. Both the Gulf and the Texas companies also increased their stocks. The Prairie's deliveries in 1911 were 33,621,304.83 barrels, as compared with 31,961,187.97 barrels in 1910, and 26,856,722.80 barrels in 1909, showing a rapid increase of demand. This percentage of increase is shared also by the independent concerns, but not so in the case of the Gulf and Texas companies, although these companies were aided materially by Texas and Louisiana fields last year. The Gulf's deliveries in 1911 in the field were 7,680,900 barrels, and in 1910 they were 7,941,500 barrels, a loss of 260,600 barrels. The Texas company increased its deliveries, according to the estimates, the figures herewith given being only approximate, about 200,000 barrels.

The Gulf Pipe Line Company "run" 8,218,700 barrels of oil in 1911, making 33,951,559 barrels it has handled in the field since it started in 1907. In 1910 its runs were 7,941,500 barrels. It also has pipe lines to Caddo and the Texas fields. The Gulf company ranks second in importance in the mid-continent field as a pipe line owner. It handles the production of 1,983 wells.

The runs of the Texas company were approximately 8,447,370 barrels, as compared with 7,513,000 in 1910. These figures are estimates and given as approximate, the company refusing to give out any information. The Texas company, it is estimated, is running the production of about 1,175 wells, the Cudahy company, whose refinery is at Coffeyville, about 1,170 wells and the national Refinery at Coffeyville about 515 wells. Texas gets considerable more oil from practically the same number of wells than the Cudahy company does. The Cudahy wells are in the shallow sand district where the production is very small, while the Texas wells are in the southern end of the field and the wells are mostly large.

The total runs of all the pipe lines aggregated 50,937,850 barrels in 1911, which was a daily average of 139,528.35 barrels. The average in 1910 was 128,931.64 barrels, and in 1909 117,346 barrels.

The independent refineries and independent fuel oil shippers, it is estimated, from the most reliable figures at hand, marketed 23,000 barrels a day, a total of 8,395,000 barrels. It is possible if all the shipments of this character could be ascertained these figures might be slightly increased. Compared with 1910 these figures represent an increase of 2,007,500 barrels. They help to show the wonderful development of this field.

MID-CONTINENT PRODUCTION BY YEARS.

	Barrels.
Prior to pipe line, '99	442,379
1900	74,714
1901	179,151
1902	331,749
1903	1,071,015
1904	5,603,036
1905	12,454,818
1906	21,694,154
1907	46,161,654
1908	48,274,782
1909	48,007,267
1910	53,429,313
1911	59,332,850
Total to date	297,056,882

RUNS BY YEARS.

Prairie Oil and Gas Company.

	Barrels.
Prior to pipe line, '99	442,379
1900	74,714
1901	179,151
1902	331,749
1903	1,071,015
1904	5,603,036
1905	11,854,818
1906	21,194,154
1907	35,610,340
1908	33,266,282
1909	28,773,727
1910	31,587,313
1911	34,671,780
Total	204,660,458

Gulf Pipe Line.

	Barrels.
1907	5,424,569
1908	5,638,300
1909	6,728,490
1910	7,941,500
1911	8,218,700
Total	33,951,559

The Texas Company.

	Barrels.
1907	3,484,245
1908	5,371,000
1909	7,329,500
1910	7,513,000
1911	8,047,370
Total	31,745,115

Independents.

	Barrels.
Prior to 1906	600,000
1906	500,000
1907	1,042,300
1908	3,999,200
1909	5,175,550
1910	6,387,500
1911	8,395,000
Total	26,699,750

Production of Field to Date.

	Barrels.
Prairie Oil and Gas Company	204,60,458
Gulf Pipe Line Co	33,951,559
Texas Company	31,745,115
Independents	26,699,750
Grand total to date	297,056,882

Mid-Continent Stocks, Jan. 1, 1912.

	Barrels.
Pipe lines and others	50,822,177.57

RECAPITULATION—MID-CONTINENT.

Total Runs—All Pipe Lines.

1911.	Total bbls.	Daily aver.
January	3,788,851.74	122,221.02
February	3,857,812.41	134,207.59
March	5,923,306.84	191,074.41
April	4,803,551.42	160,118.38
May	4,347,593.18	140,245.23
June	4,078,767.31	135,958.91
July	4,123,008.11	132,998.33
August	4,008,679.02	132,215.45
September	3,990,445.96	133,014.87
October	4,118,150.81	133,835.51
November	3,919,819.66	130,660.66
December	3,887,863.62	125,414.96
Total, 1911	50,937,850.08	139,528.35
Total, 1910	47,041,812.08	128,931.64
Total, 1909	42,831,416.61	117,346.00

Total Deliveries—All Pipe Lines.

1911.	Total bbls.	Daily aver.
January	4,035,619.37	130,181.27
February	3,930,577.00	140,377.75
March	4,349,327.90	140,300.90
April	4,261,031.70	142,034.39
May	4,203,631.32	135,600.72
June	3,950,852.80	131,695.26
July	4,151,093.12	133,904.52
August	4,071,513.34	131,339.14
September	4,138,316.10	137,943.87
October	3,932,050.68	126,832.28
November	3,980,582.40	132,686.08
December	4,070,024.10	131,291.10
Total, 1911	49,074,619.83	134,341.42
Total, 1910	47,340,437.79	130,272.19
Total, 1909	39,800,642.23	108,981.80

Total Tanked—All Pipe Lines.

1911.	Total bbls.	Daily aver.
January	.....	.....
February	.....	.....
March	1,573,978.94	50,773.51
April	542,519.72	18,083.99
May	143,979.86	4,644.51
June	144,965.00	4,832.00
July	129,990.00	4,193.00
August	27,165.68	876.31
September	.....	.....
October	186,100.13	6,003.23
November	45,000.00	1,500.00
December	58,900.00	1,900.00
Total, 1911	2,852,599.33	10,311.84
Total, 1910	1,270,506.94	8,405.71
Total, 1909	3,141,256.42	8,561.71

Taken Out of Tankage—All Pipe Lines.

1911.	Total bbls.	Daily aver.
January	246,767.63	7,960.25
February	172,764.59	6,170.16
March	.....	.....
April	.....	.....
May	.....	.....
June	17,050.49	568.35
July	158,075.01	5,099.19
August	.....	.....
September	147,870.14	4,929.00
October	.....	.....
November	105,762.74	3,525.42
December	241,060.48	7,776.14
Total, 1911	1,089,351.08	5,146.93
Total, 1910	1,651,410.32	7,775.51
Total, 1909	111,326.04	3,591.16

Mid-Continent Stocks, Jan. 1,1912.

	Barrels.
Prairie Oil and Gas Co	41,512,202.57
Gulf Pipe Line Co	5,815,370.00
Texas Company	2,436,455.00
Producers	958,150.00
Total, Jan. 1, 1912	50,822,177.57
Total, Jan. 1, 1911	53,313,213.80

THE PRAIRIE OIL AND GAS COMPANY.

Runs.

1911.	Total bbls.	Daily aver.
January	2,626,351.74	84,721.02
February	2,508,732.41	89,597.59
March	4,403,376.84	142,044.41
April	3,215,351.42	107,178.38
May	2,787,093.18	89,906.23
June	2,628,117.31	87,603.91
July	2,666,878.11	86,028.33
August	2,822,099.02	91,035.45
September	2,811,095.96	93,769.87
October	2,902,700.81	93,635.51
November	2,671,819.66	89,060.66
December	2,626,163.62	84,714.96
Total	34,671,780.08	94,941.36
Total, 1910	31,587,312.59	86,509.45
Total, 1909	28,773,726.98	78,888.06

Deliveries.

1911.	Total bbls.	Daily aver.
January	2,873,119.37	92,681.27
February	2,681,497.00	95,767.75
March	2,959,597.90	95,470.90
April	2,792,831.70	93,094.39
May	2,695,831.32	86,961.72
June	2,645,167.80	88,172.26
July	2,824,953.12	91,127.52
August	2,794,933.34	90,159.14
September	2,936,966.10	98,898.87
October	2,747,600.68	88,632.28
November	2,777,582.40	92,586.08
December	2,867,224.10	92,491.10
Total	33,621,304.83	92,153.60
Total, 1910	31,961,187.97	87,542.79
Total, 1909	26,856,722.80	73,540.70

Drew on Stocks.

	Total bbls.	Daily aver.
January	246,767.63	7,960.25
February	172,764.59	6,170.16
June	17,050.49	568.35
July	158,075.01	5,099.19
September	147,870.14	4,929.00
November	105,762.74	3,525.42
December	241,060.48	7,776.14
Total	1,089,351.08	5,146.93
Total, 1910	1,651,410.74	7,775.51
Total, 1909	111,326.04	3,591.16

Put in Tankage.

	Total bbls.	Daily aver.
March	1,443,778.94	46,573.51
April	422,519.72	14,083.99
May	91,279.86	2,944.51
August	27,165.68	876.31
October	155,100.13	5,003.23
Total	2,139,844.33	13,906.31
Total, 1910	1,270,506.94	8,405.71
Total, 1909	2,028,330.22	6,159.99

Stocks.

	Barrels.
January 1	40,275,143.80
February 1	39,921,506.15
March 1	39,820,938.64
April 1	41,459,906.64
May 1	42,068,048.33
June 1	42,399,469.74
July 1	42,624,724.53
August 1	42,392,420.12
Septemebr 1	42,461,763.67
October 1	42,266,177.79
November 1	42,100,829.37
December 1	41,741,559.57
Jvanuary 1, 1012	41,512,202.57

TEXAS COMPANY.

Runs—Approximate.

1911.	Total bbls.	Daily aver.
January	542,500	17,500
February	669,480	23,910
March	717,030	23,130
April	838,200	27,940
May	832,000	26,839
June	790,650	26,355
July	789,030	25,470
August	600,780	19,380
September	532,350	17,745
October	548,950	17,700
November	603,000	20,100
December	582,800	18,800
Total	8,047,370	22,072
Total, 1910	7,513,000	20,583
Total, 1909	7,329,500	20,000

Tanked.

	Total bbls.	Daily aver.
June	144,965	4,832
July	129,990	4,193
Total	274,955	4,512
Stocks January 1, 1912		2,436,455

GULF PIPE LINE COMPANY.

Runs—Approximate.

1911.	Total bbls.	Daily aver.
January	620,000	20,000
February	679,600	20,700
March	802,900	25,900
April	750,000	25,000
May	728,500	23,500
June	660,000	22,000
July	666,500	21,500
August	675,800	21,800
September	645,000	21,500
October	666,500	21,500
November	645,000	21,500
December	678,900	21,900
Total	8,218,700	22,233
Total, 1910	7,941,500	21,858
Total, 1909	6,728,490	18,434

Deliveries.

1911.	Total bbls.	Daily aver.
January	620,000	20,000
February	579,600	20,700
March	672,700	21,700
April	630,000	21,000
May	675,800	21,800
June	660,000	22,000
July	666,500	21,500
August	675,800	21,800
September	645,00	21,500
October	635,500	20,500
November	600,000	20,000
December	620,000	20,000
Total	7,680,900	21,042
Total, 1910	7,941,500	21,858
Total, 1909	6,187,060	16,950

Tanked.

1911.	Total bbls.	Daily aver.
March	130,200	4,200
April	120,000	4,000
May	52,700	1,700
October	31,000	1,000
November	45,000	1,500
December	58,900	1,900
Total	437,800	2,383
Total, 1910	541,430	.....
Stocks (mid-continent), Jan. 1, 1912		5,815,370

Wells Drilled in 1911.

Kansas	511
Osage	500
Cherokee	2,985
Pawnee	172
Creek	765
Miscellaneous	23
Total, 1911	4,956
Former years	29,966
Grand Total	34,922

There were 4,956 wells drilled in the mid-continent field in 1911. This was exactly 100 more than were drilled in 1910, and the largest number ever completed in this field in a single year. The record month of the mid-continent was May, 1911, when there were 588 completions. Had the activity of the first half of the year been maintained during the second half 1911 would have set a hard pace for future years to follow. The last five months fell off about 100 wells a month in the number of completions, as compared with the average for first six months.

Of the 4,956 wells drilled 3.653 were oil wells, 572 were gas wells and 731 were failures. This was a loss of 57 producers over 1910, a gain of 84 gassers and a gain of 73 failures. The estimated new production of the 1911 wells was 177,656 barrels, as against 182,289 barrels in 1910.

The year witnessed a number of important developments. The Delaware extension was pushed westward into range 14 and was connected with the Dewey shallow sand by a very narrow and inconsequential spur. Numerous attempts to find a north extension from Lenapah to the Kansas line failed. The result was a large slump during the latter part of the year in drilling operations in the shallow sand division of the Cherokee.

In the northern part of the west lodge of the Cherokee an attractive pool, which has only partially been exploited was found in the sections known as the Ramsey pool. These wells are comparatively shallow, and start at from 75 to 200 barrels. There is prospect of the pool extending over into the Osago.

The Hogshooter during the year was broadened toward Nowata, and some fine wells developed to the east. Gas has been found to the south, toward Collinsville, and it will not be surprising if another pool is found between it and Bud Creek, if indeed Bud Creek and the upper Cherokee are not fully connected eventually.

The year 1911 witnessed the greatest activity yet in the Bud Creek. None of its wells were unusually large, but many good producers were found. From Tulsa through the Flat Rock north to Skiatook is now all tested, over the Osage line, with here and there important tests to the east. There will continue to be considerable drilling over this district during the coming year.

Early in the year that has just closed the Bainsdall Oil Company reported a gusher at Osage Junction, and there immediately followed a rush to the drill which soon resulted in a new production of 26,000 barrels a day. This pool was limited in area, admitted of but few operators and was soon drilled up. The Northwestern oil Company and others found another small pool to the northwest several miles, but it too was confined to narrow limits. About this time the Prairie Oil & Gas Company drilled a deep sand well in Pawnee county and began the development of an important pool. The Pawnee county pool is still active and completing about 15 wells a month. The beauty of these wells is the staying quality. The territory is also pretty well divided among operators, all three of the big pipe line companies being represented. So far the pool has been extending northward, but there are possibilities to the south and southwest. There have been 172 wells drilled in the Pawnee pool, of which 129 have been producing wells, 5 gassers and 38 failures. The estimated new production has been 14,130 barrels a day, according to the Reporter's estimate. The actual pipe line runs are 12,500 barrels a day, as some of these wells are now eight months old and have naturally fallen off.

Following the Pawnee discovery came later in the year the opening of the Jenks or Perryman pool, across the river north of the town of Jenks, and which has developed south into the town of Jenks and which promises to ultimately connect with the northeast corner of the original Glenn pool. For five years this rich spot was drilled all around and yet missed by hairbreadth margins.

During the summer much attention was attracted to Ponca City, Kay county, where the 101 Ranch Oil Company has been doing more or less drilling for the last two years, and where it finally discovered what promises to be a good pool of oil. Several fair wells have been drilled and a number of the large operators have started operations in the field, with the possibilities right of some good reports in 1912.

At this time the daily output of the Osage pool is about 7,000 barrels. Starting from nothing, reaching 26,000 barrels a day and declining to 7,000 barrels a day, all within a year, is something for oil operators to ponder over. The daily production of the Pawnee pool is 12,500 barrels a day, all new 1911 production. The Jenks pool, the newest development, is about 3,000 barrels a day. It is not likely this pool will ever develop a large output. The production at Ponca City has not yet become a factor, amounting to probably 250 barrels a day.

It would be foolish to attempt to predict the possibilities in 1912. It will do well to maintain the record of the past year. The Cherokee cannot be depended upon as in the past. The shallow sand is in the "sear and yellow leaf" of its career and the west side is pretty thoroughly drilled up. There are possibilities unlimited in the Osage, but it is doubtful if any big strikes are made there the coming year. Apparently the most hope is in the Creek and the far southern part of Oklahoma, where there is a vast amount of wildcatting and where new pools are very likely. The development of the big Electra field across the line in Texas offers strong incentive to test every foot of territory between that pool and the Glenn, with good prospects of finding something. As will be observed by reference to the tables there is more activity in the Creek than there has heretofore been, more wells being drilled in December than in any previous month during the year, and the production reaching its highest point. During the year 765 wells were drilled in the Creek, a material decline as compared with the previous year, chargeable chiefly to the decline of the Glenn pool and the Muskogee and Hamilton Switch pools. But the tide is turning. There is vast territory yet to be tested in the south part of the field.

Mid-Continent.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	283	221	34	28	12,343
February	432	351	36	45	17,847
March	477	402	27	48	21,069
April	530	391	72	67	18,522
May	558	412	58	88	18,811
June	428	278	71	79	11,636
July	411	286	50	75	13,326
August	381	278	44	59	10,400
September	378	263	44	71	13,421
October	347	250	44	53	14,841
November	366	258	46	62	11,861
December	365	263	46	56	12,979
Totals	4,956	3,653	572	731	177,656
Totals, 1910	4,856	3,710	488	658	182,289

Wells Drilled in Kansas.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	29	7	17	5	145
February	36	10	15	11	230
March	26	7	9	10	210
April	56	16	28	12	466
May	68	22	26	20	570
June	56	20	26	10	422
July	43	23	11	9	505
August	37	18	13	6	508
September	37	14	13	10	305
October	52	25	17	10	553
November	29	10	14	5	250
December	42	15	19	8	360
Totals	511	187	208	116	4,518
Totals, 1910	486	88	287	111	2,316

Wells Drilled in Oklahoma.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	254	214	17	23	12,198
February	396	341	23	34	17,617
March	451	365	18	38	21,459
April	474	375	44	55	18,062
May	490	390	32	68	18,241
June	372	258	45	69	11,214
July	308	203	39	66	12,821
August	344	260	31	53	9,892
September	341	240	31	61	13,116
October	295	225	27	43	14,288
November	337	248	32	57	11,611
December	323	248	27	48	12,619
Totals	4,445	3,466	364	615	173,138
Totals, 1910	4,370	3,622	201	547	179,973

Wells Drilled in the Osage.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	34	28	3	3	4,060
February	52	47	1	4	3,938
March	56	54	1	1	4,213
April	33	28	3	2	3,090
May	55	44	2	9	3,940
June	38	33	2	3	3,390
July	39	32	2	5	3,945
August	38	31	3	4	1,300
September	38	33	..	5	2,755
October	45	38	1	4	3,870
November	35	28	3	4	2,070
December	39	34	2	3	2,065
Totals	500	430	23	47	38,636
Totals, 1910	269	233	9	27	20,925

Wells Drilled in the Cherokee.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	170	147	11	12	5,158
February	266	235	15	16	9,554
March	312	285	9	18	13,071
April	354	291	31	32	11,527
May	351	288	25	38	10,241
June	246	177	34	35	5,179
July	255	178	30	47	5,443
August	230	176	19	35	4,594
September	222	168	29	25	6,376
October	176	129	23	24	4,368
November	221	161	26	34	4,616
December	182	139	21	22	3,859
Totals	2,985	2,374	273	338	83,986
Totals, 1910	3,021	2,598	134	289	102,366

Wells Drilled in Pawnee.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
March	8	4	2	2	275
April	8	5	1	2	500
May	25	15	..	10	1,390
June	19	13	1	5	830
July	17	15	..	2	1,745
August	24	21	..	2	2,270
September	19	14	..	5	2,185
October	20	16	..	4	2,190
November	15	12	..	3	1,320
December	18	14	1	3	1,425
Totals	172	129	5	38	14,130

Wells Drilled in the Creek.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	50	39	3	8	2,980
February	74	58	3	13	4,125
March	72	51	5	16	3,885
April	76	50	9	17	2,930
May	69	53	3	13	2,570
June	65	34	7	24	1,790
July	52	38	4	10	1,688
August	53	32	9	12	1,728
September	55	33	2	20	1,740
October	51	39	3	9	3,715
November	66	47	3	16	3,605
December	82	61	3	18	5,270
Totals	765	535	56	174	36,026
Totals, 1910	1,048	774	54	220	56,137

Cherokee Deep Sand.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	79	61	11	7	1,750
February	127	112	11	4	3,040
March	158	140	9	9	4,066
April	177	132	28	17	3,672
May	201	149	21	31	4,570
June	162	117	28	17	3,339
July	132	89	23	20	2,813
August	125	99	13	13	2,927
September	137	103	24	10	4,206
October	107	78	18	11	2,780
November	153	109	22	22	3,615
December	116	88	16	12	2,850
Totals	1,674	1,277	224	173	40,228
Totals, 1910	1,333	1,120	118	95	38,643

Cherokee Shallow Sand.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	91	86	..	5	3,408
February	139	123	4	12	6,514
March	154	145	..	9	8,405
April	177	159	3	15	7,855
May	150	139	4	7	5,677
June	84	60	6	18	1,840
July	123	89	7	27	2,630
August	105	77	6	22	1,667
September	85	65	5	15	2,170
October	69	51	5	13	1,588
November	68	52	4	12	1,001
December	66	51	5	10	1,009
Totals	1,311	1,097	49	165	43,764
Totals, 1910	1,688	1,478	16	194	69,199

Creek Nation.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	50	39	3	8	2,980
February	69	55	2	12	4,020
March	72	51	5	16	3,885
April	76	50	9	17	2,930
May	69	53	5	11	2,670
June	65	34	7	24	1,790
July	52	38	4	10	1,688
August	53	32	9	12	1,728
September	55	33	2	20	1,740
October	51	39	3	9	3,715
November	66	47	3	16	3,605
December	82	61	3	18	5,270
Totals	760	532	55	173	36,021
Totals, 1910	1,048	774	54	220	56,137

Copan.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	18	12	4	2	170
February	30	26	3	1	615
March	31	31	..	..	965
April	32	26	1	5	729
May	38	27	3	8	720
June	31	22	2	7	423
July	19	14	1	4	430
August	13	12	..	1	205
September	19	16	1	2	395
October	9	6	..	3	130
November	26	19	3	4	325
December	23	12	3	8	245
Totals	289	223	21	45	5,352
Totals, 1910	255	185	54	18	6,670

Dewey.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	21	17	3	1	465
February	45	41	3	1	995
March	38	34	1	3	941
April	43	33	8	2	915
May	59	50	3	6	1,480
June	36	33	2	1	855
July	21	15	4	2	340
August	43	37	5	1	922
September	33	26	4	3	563
October	26	19	5	2	550
November	24	18	2	4	595
December	24	21	2	1	555
Totals	413	344	42	27	8,976
Totals, 1910	445	422	12	11	13,196

Bartlesville.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	13	12	..	1	355
February	12	12	..	..	405
March	18	18	..	..	770
April	21	21	..	..	660
May	14	14	..	..	330
June	16	13	..	3	310
July	26	19	1	6	500
August	12	10	1	1	225
September	17	15	2	..	343
October	12	10	..	2	240
November	11	11	..	..	230
December	19	18	..	1	555
Totals	191	173	4	14	4,923
Totals, 1910	160	143	4	13	4,033

Hogshooter.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	11	5	4	2	235
February	13	8	5	..	340
March	36	26	8	2	970
April	45	23	18	4	605
May	44	17	13	14	665
June	34	12	19	3	380
July	33	12	16	5	380
August	34	23	6	5	935
September	36	17	16	3	1,005
October	27	14	10	3	640
November	28	8	13	7	270
December	21	9	11	1	375
Totals	392	174	139	49	6,800
Totals, 1910	177	118	43	16	4,105

Bird Creek.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	10	10	..	..	405
February	21	19	..	2	525
March	22	21	..	1	735
April	22	20	..	2	645
May	21	20	..	1	790
June	26	23	3	..	865
July	21	19	1	1	828
August	20	15	1	4	595
September	19	17	..	2	1,120
October	13	13	..	..	615
November	37	35	..	2	1,595
December	13	12	..	1	490
Totals	245	224	5	16	9,208
Totals, 1910	164	150	1	13	6,735

Flat Rock.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	2	1	..	1	35
February	3	3	..	..	85
March	5	3	..	2	115
April	8	4	1	3	65
May	14	12	2	..	360
June	14	11	1	2	475
July	12	10	..	2	335
August	3	2	..	1	45
September	8	8	..	..	265
October	11	9	1	1	255
November	13	10	..	3	280
December	11	11	..	..	305
Totals	104	84	5	15	2,620
Totals, 1910	67	54	2	11	2,080

Delaware.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	53	52	..	1	2,590
February	67	60	2	5	3,780
March	80	80	..	..	5,845
April	100	80	1	10	6,510
May	87	81	1	5	4,370
June	41	37	1	3	1,485
July	49	41	1	7	1,710
August	25	17	1	7	720
September	44	37	3	4	1,575
October	15	15	..	..	975
November	18	18	..	..	410
December	12	11	..	1	460
Totals	591	538	10	43	30,430
Totals, 1910	786	684	9	93	52,431

Lenapah.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	8	5	..	3	500
February	26	22	2	2	2,250
March	27	23	2	2	1,875
April	15	12	2	1	523
May	13	10	3	..	348
June	11	1	5	5	20
July	13	2	6	5	100
August	13	1	5	7	75
September	4	1	2	1	20
October	9	..	3	6	....
November	13	2	3	8	110
December	10	1	5	4	15
Totals	162	80	38	44	5,836

Coody's Bluff.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	8	8	..	..	33
February	8	8	..	..	94
March	2	2	..	..	90
April	1	1	..	..	15
May	14	14	..	..	275
June	2	2	..	..	10
July	6	4	..	2	65
August	3	3	..	..	30
September	4	4	..	..	35
October	4	3	..	1	9
November	..	..	..	..	....
December	2	2	..	..	15
Totals	54	51	..	3	671
Totals, 1910	127	107	..	20	1,600

Alluwe.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	10	10	..	..	115
February	15	13	..	2	180
March	25	23	..	2	385
April	30	28	..	2	370
May	13	13	..	..	220
June	9	9	..	..	205
July	19	16	..	3	345
August	17	16	..	1	475
Septeraber	18	18	..	..	455
October	17	14	..	3	319
November	17	17	..	..	248
December	11	10	..	1	155
Totals	201	187	..	14	3,472
Totals, 1910	279	255	..	24	5,650

Chelsea.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	12	11	..	1	170
February	15	13	..	2	135
March	13	12	..	1	165
April	18	18	..	..	260
May	17	15	..	2	324
June	11	8	..	3	75
July	10	8	..	2	90
August	9	6	..	3	100
September	6	3	..	3	50
October	10	7	2	1	110
November	14	10	1	3	175
December	27	23	..	4	279
Totals	162	134	3	25	1,953
Totals, 1910	350	299	5	46	6,613

Cloggett.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	..	..	..	..	....
February	8	7	..	1	55
March	7	5	..	2	45
April	13	11	..	2	177
May	6	6	..	..	140
June	5	3	..	2	45
July	17	15	..	2	270
August	35	34	..	1	267
September	5	2	..	3	35
October	11	10	..	1	145
November	5	5	..	..	58
December	4	4	..	..	85
Totals	116	102	..	14	1,322
Totals ,1910	146	133	..	13	2,905

Glenn.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	21	18	..	3	1,350
February	34	31	..	3	2,190
March	41	28	3	10	2,145
April	37	27	2	8	1,505
May	31	26	2	3	1,270
June	23	18	..	5	1,080
July	21	15	1	5	588
August	23	17	2	4	865
September	17	14	..	3	755
October	21	18	..	3	1,800
November	24	18	..	6	1,170
December	23	16	..	7	1,000
Totals	316	246	10	60	15,718
Totals, 1910	511	441	19	51	27,455

Bald Hill.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	5	3	2	..	200
February	4	2	2	..	175
March	3	3	..	..	320
April	5	3	1	1	275
May	7	6	1	..	320
June	10	2	2	6	110
July	4	2	2	..	110
August	4	3	..	1	235
September	11	3	2	6	175
October	3	2	..	1	200
November	2	1	..	1	30
December	4	4	..	..	240
Totals	62	34	12	16	2,390

Morris.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	2	1	..	1	45
February	2	1	..	1	40
March	3	3	..	..	180
April	5	4	1	..	145
May	5	3	..	2	235
June	3	1	1	1	50
July	3	2	..	1	65
August	7	3	1	4	18
September	6	5	..	1	215
October	4	4	..	..	425
November	1	..	1	..	....
December	8	5	..	3	580
Totals	49	31	4	14	1,998
1911.	Com.	Oil.	Gas.	Dry.	Prod.

Henryetta.

January	4	2	..	2	130
February	5	3	..	2	150
March	7	3	2	2	200
April	4	2	1	1	140
May	4	2	..	2	180
June	4	4	..	..	225
July	10	8	1	1	525
August	9	6	2	1	515
September	6	5	..	1	260
October	6	5	1	..	400
November	6	4	1	1	150
December	6	4	2	..	350
Totals	71	48	10	13	3,225
Totals, 1910	58	29	6	23	3,905

Hamilton.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	5	4	..	1	675
February	8	7	..	1	625
March	6	4	..	2	225
April	6	1	4	1	10
May	6	4	1	1	160
June	6	2	1	3	35
July	2	1	..	1	20
August	3	2	..	1	200
December	1	1	..	..	150
Totals	43	26	6	11	2,100
Totals, 1910	127	75	13	39	8,822

Muskogee.

1911	Com.	Oil.	Gas.	Dry.	Prod.
January	10	9	..	1	450
February	12	9	..	3	665
March	12	10	..	2	790
April	19	13	..	6	855
May	14	12	..	2	505
June	15	7	2	6	290
July	12	10	..	2	380
August	6	4	1	1	95
September	9	2	..	7	40
October	6	2	..	4	80
November	5	4	..	1	185
December	3	1	..	2	50
Totals	123	83	3	37	4,385
Totals, 1910	199	143	4	52	9,825

Pawnee County.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
February	5	3	1	1	105
March	8	4	2	2	275
April	8	5	1	2	500
May	25	15	..	10	1,390
June	19	13	1	5	830
July	17	15	..	2	1,745
August	23	21	..	2	2,270
September	19	14	..	5	2,185
October	20	16	..	4	2,190
November	15	12	..	3	1,320
December	18	14	1	3	1,425
Totals	177	132	6	39	14,235

Ochelata.

1911.	Com.	Oil.	Gas.	Dry.	Prod.
January	4	4	..	..	85
February	3	3	..	..	75
March	8	7	..	1	170
April	6	5	..	1	100
May	11	9	..	2	225
June	5	3	1	1	31
October	2	2	..	..	20
Totals	39	33	1	5	706
Totals, 1910	61	50	2	9	1,215

Last Six Years Compared.

MID-CONTINENT.

	1906 Com.	1906 Prod.	1907 Com.	1907 Prod.	1908 Com.	1908 Prod.
Jan..	338	11,852	245	10,174	258	10,100
Feb..	343	10,251	309	18,646	176	7,435
Mar..	292	9,725	328	19,170	248	10,540
Apr..	415	13,431	427	28,325	266	10,359
May..	475	13,657	444	24,963	311	16,835
June.	455	13,686	426	28,561	249	11,070
July..	470	15,869	423	28,035	265	15,095
Aug..	312	15,585	439	29,938	309	19,683
Sept..	183	6,375	425	31,028	358	14,921
Oct..	102	5,827	500	35,769	306	16,940
Nov..	147	7,895	421	26,355	323	13,797
Dec..	234	14,425	333	19,857	425	17,502
Tot.	3,876	138,578	4,720	300,821	3,494	164,257

	1909 Com.	1909 Prod.	1910 Com.	1910 Prod.	1911 Com.	1911 Prod.
Jan..	334	13,110	290	10,330	283	12,343
Feb..	327	12,783	315	11,415	432	17,847
Mar..	388	15,057	346	13,118	477	21,669
Apr..	406	15,848	520	15,506	530	18,522
May..	405	15,250	382	12,704	558	18,811
June.	368	13,715	500	19,078	428	11,636
July..	331	13,062	374	14,832	411	13,326
Aug..	258	10,939	488	25,393	381	10,400
Sept..	246	11,672	424	15,178	378	13,421
Oct..	284	11,297	426	15,890	347	14,841
Nov..	214	10,135	362	12 938	366	11,801
Dec..	289	11,439	429	15,907	365	12,979
Tot.	3,850	154,307	4,856	182,289	4,956	177,656

Kansas Division.

WELLS DRILLED, 1910.

	Jan.	Feb.	Mar.	Apr.	May.	Jun.
Montgomery	8	7	5	12	11	3
Chautauqua	4	2	1	4	2	3
Wilson	9	8	6	9	13	14
Neosho	15	9	17	10	13	11
Allen	7	8	2	24	7	1
Miscellaneous	..	2	2	3	1	3
Totals	43	36	33	62	47	35

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Tot.
Montgomery	8	7	7	10	5	8	91
Chautauqua	5	5	7	8	10	8	59
Wilson	11	11	4	12	7	4	108
Neosho	8	3	11	6	6	8	117
Allen	4	6	2	5	7	11	84
Miscel'eous	..	3	3	3	2	5	27
Totals	36	35	34	44	37	44	486

WELLS DRILLED, 1911.

	Jan.	Feb.	Mar.	Apr.	May.	Jun.
Montgomery	5	8	8	17	23	17
Chautauqua	7	7	5	4	9	4
Wilson	9	9	8	21	19	13
Neosho	3	2	2	5	10	9
Allen	4	8	2	9	7	11
Elk	..	..	..	..	..	..
Miscellaneous	1	2	..	..	..	..
Totals	29	36	26	56	68	56

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Tot.
Montgomery	8	13	8	17	7	14	145
Chautauqua	8	7	5	9	5	12	82
Wilson	9	7	9	8	5	11	128
Neosho	10	7	8	11	6	2	75
Allen	8	4	5	7	4	1	70
Elk	..	..	2	..	2	2	6
Miscel'eous	..	..	..	..	..	..	5
Totals	43	37	37	52	29	42	511

Mid-Continent Stocks by Years.

JANUARY 1—BARRELS.

Pipe line—	1908.	1909.	1910.
Prairie	32,624,422	38,959,233	40,644,660
Gulf	3,940,122	4,503,000	5,377,670
Texas	2,783,745	1,500,000	4,075,000
Producers	9,525,000	9,966,000	8,541,381
Totals	48,273,289	54,928,233	58,638,611

Pipe line—	1911.	1912.
Prairie	40,275,143.80	41,512,392.57
Gulf	5,377,540.00	5,815,370.00
Texas	2,161,500.00	2,436,455.00
Producers	5,500,000.00	958,150.00
Totals	53,313,213.80	50,822,177.57

Number of Wells on Prairie Line.

District.	1909.	1910.	1911.	1912.
Kansas	1,536	1,227	1,315	1,531
Osage	905	952	984	1,203
Cherokee—				
Deep	2,155	2,677	3,214	3,734
Shallow	4,530	5,406	6,014	5,288
Creek	1,108	1,236	1,000	1,000
Cleveland	192	184	176	281
Totals	10,426	11,682	12,703	13,127
On other lines	2,489	2,966	4,644	7,129
Total wells	12,915	14,648	17,347	20,256
Gas, dry and exhausted	8,345	10,462	12,619	14,666
Grand total	21,260	25,110	29,966	34,922

Connected Wells in Kansas.

	1909.	1910.	1911.	1912.
Chautauqua county	664	577	737	840
Montgomery county	292	274	259	290
Wilson county	192	223	209	221
Neosho county	60	48	91	180
Franklin county	186	..	19	..
Fuel oil	..	95	..	..
Totals	1,536	1,227	1,315	1,531

Wells on Other Lines.

[Approximate.]

Gulf Pipe Line	1,983
Texas Pipe Line	1,175
Cudahy Pipe Line	1,170
National Ref. Line	515
Petroleum Products Co.	485
Other agencies	1,801
Total	7,129

Prairie Oil and Gas Company.

IRON STORAGE TANKS.

	1908.	1909.	1910.	1911.	1912
Kansas	318	322	330	323	330
Osage	16	19	20	14	14
Oklahoma	562	721	781	800	857
Mo., Ia. and Ill.	33	34	26	26	26
Arkansas	..	..	..	6	6
Totals	929	1,096	1,157	1,169	1,233

DISTRIBUTION.

Farms—	1908.	1909.	1910.	1911.	1912.
Trunk Line	..	..	9	9	9
Humboldt	29	29	28	28	28
Chanute	2	..	..	..	..
Neodesha	125	126	126	119	126
Caney	162	167	167	167	167
Total in Kansas	318	322	330	323	330
Ramona	219	232	237	237	237
Copan	107	107	107	107	107
Jenks	126	153	153	153	153
Huston (Glenn)	17	32	32	32	32
Muskogee	4	7	31	31	31
Morris	6	9	41	41	41
Bought of producers	44	124	136	150	204
Cleveland	..	..	..	27	27
Miscellaneous	11	9	16	22	25
Totals in Oklahoma	534	693	753	800	857

Total Iron Storage Tanks.

	1912 No. tanks.	1912 Capacity.
Prairie Oil and Gas Co.	1,233	44,250,000
Gulf Pipe Line Co.	202	9,000,000
Texas Company	68	3,125,000
W. H. Millikin	16	762,500
*Others	6	200,000
	1,525	.....

*It is since learned the Haywood Oil Company holds 316,000 barrels of oil in iron storage.

GULF COAST REVIEW.

Texas Production and Shipments, 1911.

Texas produced 8,877,651 barrels of oil in 1911, as compared with 8,603,862 in 1910. All of the coastal districts showed a decrease, but the development of a new field in April at Electra, Wichita county, in the northern part of the State, close to the Oklahoma line, added over 1,000,000 barrels to the gross output and overcame the shortage caused by the decline in the pools along the coast. Starting in April with 8,250 barrels for the month (disregarding about 50 barrels a day produced in the first three months of the year from test wells and consumed as fuel on the field), Electra attained an output of 359,891 barrels in November. This was its largest month, the production in December declining to 305,614 barrels. Pipe line runs of oil from this field during the year amounted to 892,204 barrels, of which 510,898 barrels were shipped by tank car to refineries in

Texas. The Magnolia Petroleum Company purchased all but about 70,000 barrels of the oil produced last year at Electra, shipping most of it to its refinery at Corsicana, and storing the remainder, over 350,000 barrels, in steel tanks near the field. The Pierce-Fordyce Oil Association and Texas Company took the 70,000 barrels which the Magnolia Company did not run.

Humble led the Texas districts in production for the year, with 2,170,210 barrels, as against 2,527,985 barrels in 1910. Sour Lake was second with 1,408,977 barrels, as compared with 1,511,669 barrels in 1910. Petrolia, Powell and Markham showed slight increases in output. Spindletop for the first time in the eleven years of its existence as a producing field is credited with less than 1,000,000 barrels, its output for 1911 being placed at 998,093 barrels. At the close of 1910 this district was producing 3,000 barrels a day. At the end of 1911 its output was a bare 2,000 barrels a day. Sour Lake maintained its average better than any of the older pools, producing 1,408,977 barrels during the year 1911, as against 1,511,669 barrels in 1910. Batson produced 1,018,102 barrels in 1911, as compared with 1,122,491 barrels in 1910. Saratoga produced 958,886 barrels, as against 1,134,695 barrels in 1910.

VESSEL SHIPMENTS FROM PORT ARTHUR AND SABINE.

The largest single item in the movement of oil from Texas is the shipment of crude and refinery products, including manufactured fuel oil, from Port Arthur and Sabine. Vessels load oil at these ports for all parts of the world and for many points along the Atlantic coast of the United States. In 1911 the movement of oil by vessel from Port Arthur and Sabine amounted to 11,937,589 barrels, of which 2,604,309 barrels were crude and 9,333,280 barrels were refinery products. A small quantity, 21,444 barrels of the oil credited to Sabine was loaded at Beaumont and shipped through Sabine by the Higgins Oil & Fuel Oil Company.

Of the total vessel movement, 9,989,884 barrels went from Port Arthur and of this the Gulf Refining Company, operating the largest independent refinery in the world, loaded 6,649,049 barrels, or 66.6 per cent. The remainder was delivered by the Texas Company. The Gulf Refining Company's deliveries constituted considerably more than half the entire quantity of crude oil and refinery products shipped by vessel from Texas.

The shipments from Sabine in 1911 amounted to 1,926,261 barrels, the Sun Pipe Line Company loading 1,125,597 barrels of crude for account of the Sun Company's refinery at Marcus Hook, Pa., the Magnolia Petroleum Company loading 628,258 barrels of illuminating oil and gasoline, mostly for export, and 87,593 barrels of manufactured fuel oil, and the Higgins Oil & Fuel Company loading 106,257 barrels of crude oil for coastwise shipment.

In 1910 the vessel shipments from Port Arthur, Sabine and Beaumont amounted to 10,708,396 barrels, indicating an increase in 1911 of 1,229,183 barrels.

QUANTITY AND VALUE OF OIL PRODUCED IN TEXAS.

	Barrels produced.	Value.	Average value per bbl
1896	1,451	$1,050	$0.721
1897	65,975	37,602	.570
1898	546,079	277,135	.508
1899	669,013	473,443	.708
1900	836,039	871,996	1.043
1901	4,393,658	1,247,150	.284
1902	18,083,658	3,998,097	.221
1903	17,955,572	7,517,479	.418
1904	22,241,413	8,156,220	.367
1905	28,136,189	7,552,262	.268
1906	12,567,897	6,765,578	.522
1907	12,322,696	10,401,863	.844
1908	11,217,155	6,730,298	.600
1909	9,256,972	7,220,458	.780
1910	8,602,862	6,363,514	.739
1911	8,877,651	6,110,837	.688
Totals	155,775,271	$73,522,022	$0.472

ALL RUNS OF HEAVY CRUDE IN TEXAS TO JANUARY 1, 1912.

	Powell.	Spindle Top.	Sour Lake.
1900	6,479	.....	.....
1901	37,121	3,593,113	.....
1902	46,812	17,420,949	44,838
1903	100,143	8,600,905	8,848,159
1904	129,329	3,433,842	6,442,357
1905	132,866	1,652,780	3,362,153
1906	673,221	1,077,942	2,156,010
1907	596,897	1,699,943	2,353,940
1908	398,649	1,741,070	1,580,655
1909	233,037	1,388,107	1,651,545
1910	270,106	1,166,896	1,511,669
1911	285,000	998,093	1,408,977
Totals	2,909,660	42,773,640	29,360,303
	Saratoga.	Batson.	Dayton.
1900	.....	.....	.....
1901	.....	.....	.....
1902	.....	.....	.....
1903	.....	4,518	.....
1904	739,239	10,904,737	.....
1905	3,125,028	3,774,841	60,294
1906	2,182,057	2,289,507	92,850
1907	2,130,928	2,164,453	108,038
1908	1,700,986	1,584,500	39,901
1909	1,206,113	1,206,213	17,647
1910	1,134,695	1,122,491	9,672
1911	958,886	1,018,102	4,344
Totals	13,177,932	24,066,362	332,746
	Humble.	Markham.	Others.	All fields
1900	.....	.....	.....	6,479
1901	.....	.....	.....	3,630,234
1902	.....	.....	.....	17,512,599
1903	.....	.....	.....	17,553,725
1904	.....	.....	151,936	21,801,440
1905	15,794,310	.....	46,471	27,748,743
1906	3,571,445	.....	86,591	12,123,693
1907	2,929,640	.....	29,286	12,013,125
1908	3,777,316	28,574	66,330	10,917,981
1909	3,183,822	60,869	50,851	8,998,204
1910	2,527,985	476,687	127,974	8,348,125
1911	2,170,210	572,323	21,465	7,437,400
Totals	33,754,728	1,138,453	574,854	148,091,078

RUNS OF CRUDE OIL FROM ALL TEXAS DISTRICTS.

[By months, 1911.]

	Humble.	Sour Lake.	Spindle Top.	Saratoga.
Jan	210,718	129,821	98,288	82,996
Feb	180,128	105,461	87,580	73,439
March	215,106	117,309	91,307	77,059
April	207,767	134,473	105,834	75,843
May	196,227	131,147	101,201	90,187
June	198,672	131,350	99,417	72,853
July	189,560	127,877	80,218	69,549
Aug	167,058	112,944	67,930	80,325
Sept	159,098	102,420	74,210	80,473
Oct	156,914	108,644	63,196	84,208
Nov	132,931	102,401	65,858	86,336
Dec	156,031	105,130	63,054	85,618
Ttl. 1911.	2,170,210	1,408,997	998,093	958,886
Ttl. 1911.	2,170,210	1,408,977	998,033	958,886
	Batson.	Markham.	Powell.	Petrolia.
Jan	105,821	56,060	15,333	18,022
Feb	86,822	59,715	37,333	13,656
March	93,844	57,700	28,667	12,081
April	89,257	65,640	27,000	13,041
May	87,692	67,307	18,000	11,760
June	81,257	23,000	26,667	13,349
July	83,747	43,400	26,667	13,378
Aug	81,728	50,606	26,667	12,902
Sept	82,138	35,700	18,000	13,346
Oct	84,811	38,115	26,000	13,979
Nov	74,881	33,075	16,667	13,216
Dec	73,704	42,005	18,000	13,107
Ttl. 1911.	1,018,102	572,323	285,001	161,808
Ttl. 1910.	1,122,491	476,687	270,106	123,031
	Electra.	Corsicana.	Others.	Total.
Jan	1,500	7,667	2,021	728,227
Feb	1,500	18,667	1,898	666,199
March	1,400	14,333	2,021	710,827
April	8,250	13,500	1,980	735,585
May	8,950	9,000	2,021	722,892
June	18,340	13,333	1,980	680,209
July	22,387	13,333	2,021	672,137
Aug	55,000	13,333	2,021	670,514
Sept	110,656	9,000	1,980	687,021
Oct	237,800	13,000	2,021	828,088
Nov	359,891	8,333	5,250	898,829
Dec	365,614	9,000	5,270	876,513
Ttl. 1911.	1,131,288*	142,499	30,464	8,877,651
Ttl. 1910.	.....	132,706	137,596	8,603,862

* Pipe line runs for the year, 892,204 barrels.

Vessel Shipments of Oil from Texas Refining Ports in 1911.

GULF REFINING COMPANY FROM PORT ARTHUR.

[Barrels of 42 gallons.]

	Crude and fuel oil.	Refined products other than fuel oil.	Total barrels.
Jan	259,824.25	278,066.50	537,890.75
Feb	272,751.13	234,329.12	507,080.25
March	261,120.94	206,793.93	467,914.87
April	257,687.14	250,838.59	508,525.73
May	256,093.12	424,229.78	680,322.90
June	294,449.75	506,958.35	601,408.10
July	277,707.55	321,415.28	599,122.83
Aug	317,283.22	252,897.94	570,181.16
Sept	347,976.12	345,239.67	693,215.79
Oct	304,921.43	252,689.60	557,611.03
Nov	272,216.39	175,634.07	447,850.46
Dec	231,114.80	246,810.04	477,924.84
Ttl. 1911.	3,353,145.84	3,295,002.87	6,649,048.71
Ttl. 1910.	3,182,153.44	3,044,235.87	6,226,389.31

VESSEL SHIPMENTS BY THE TEXAS COMPANY FROM PORT ARTHUR.

(Barrels of 42 gallons.)

1911—	Crude.	Refinery products.	Total. barrels.
January	100,284	264,926	365,210
February	32,303	159,445	191,748
March	40,227	209,922	250,149
April	51,619	191,528	243,147
May	28,102	259,017	287,119
June	90,313	201,907	292,220
July	45,576	189,259	234,835
August	86,605	255,068	341,673
September	72,987	140,801	213,788
October	93,729	272,006	365,735
November	78,298	157,346	235,644
December	190,326	129,241	319,567
Totals, 1911	910,369	2,430,466	3,340,835
Totals, 1910	.....	.....	2,831,996

VESSEL SHIPMENTS BY SUN PIPE LINE COMPANY FROM SABINE PASS.

(Crude Oil.)

1911—	Barrels.
January	166,989
February	45,728
March	66,662
April	72,863
May	21,102
June	68,936
July	161,889
August	93,667
September	141,205
October	93,478
November	120,995
December	72,983
Totals, net, 1911	1,125,597
Totals, 1910	1,250,320

VESSEL SHIPMENTS BY HIGGINS OIL & FUEL COMPANY FROM SABINE AND BEAUMONT.

(Crude Oil.)

	Sabine, barrels.	Beaumont, barrels.	Total, barrels.
January	7,019	4,505	11,524
February	4,713	.....	4,713
March	1,640	4,261	5,901
April	15,578	.....	15,578
May	15,777	.....	15,777
June	2,027	4,200	6,277
July	1,414	8,478	9,892
August	7,816	.....	7,816
September	569	.....	569
October	7,809	.....	7,809
November	15,118	.....	15,118
December	5,333	.....	5,333
Totals, 1911	84,813	21,444	106,257
Totals, 1910	57,439	127,890	185,329

VESSEL SHIPMENTS BY THE MAGNOLIA PETROLEUM COMPANY FROM SABINE.

(Barrels of 42 gallons.)

1911—	Mfd. fuel oil.	Other refinery products.	Total barrels.
January	.....	75,283	75,283
February	.....	.....	.....
March	786	41,300	42,086
April	26,357	23,702	50,059
May	.....	79,506	79,506
June	.....	51,662	51,662
July	1,857	89,636	91,493
August	57,156	25,059	82,215
September	1,437	76,324	77,761
October	.....	.....	.....
November	.....	65,872	65,872
December	.....	99,914	99,914
Totals, 1911	87,593	628,258	715,851

TOTAL VESSEL SHIPMENTS OF CRUDE OIL AND REFINERY PRODUCTS FROM PORT ARTHUR AND SABINE.

1911—	Crude.	Refinery products.	Total. barrels.
January	398,333	857,964	1,155,997
February	120,491	628,779	749,270
March	150,828	681,885	832,713
April	178,165	712,007	890,172
May	82,358	1,001,469	1,083,827
June	165,476	854,977	1,020,453
July	281,847	813,385	1,097,232
August	281,569	813,983	1,095,552
September	252,597	873,942	1,126,539
October	249,840	774,793	1,024,633
November	257,620	627,859	885,479
December	283,185	692,537	975,722
Totals	2,604,309	9,333,280	11,937,589

Louisiana Production.

Louisiana's production in 1911 was 12,784,809 barrels, as compared with 7,290,396 barrels in 1910. Caddo is credited with 8,359,662 barrels, as against 5,654,114 barrels in 1910, and Vinton, a coastal district which was developed late in 1910 and produced only 70,909 barrels in that year, is credited with 3,232,673 barrels.

Cadda attained its maximum output int October, 1911, when a well was brought in which showed a capacity at the start of over 1,000 barrels an hour. The average output of the field during this month was only a few barrels under 30,000 barrels per day. By December the average production had declined to a little under 22,000 barrels a day. Most of the oil obtained in this field is light, testing 42 to 44 degrees in gravity by the Beaume scale. The wells come in large, but soon blow "their heads off" and settle down to moderate producers. The Gulf Refining Company of Louisiana, Standard Oil Company of Louisiana and Producers Oil Company are the principal producers in this district. The first named two and the Texas Company have pipe lines to their refineries, the Standard's being at Baton Rouge, La., and those of the other two companies at Port Arthur, Tex.

The production of the J. M. Guffey Petroleum Company's wells, and those of others in Marion county, Tex., adjoining the Caddo field on the west, and just across the Louisiana line, is included in the Caddo output as given in this review and in the statistical tables accompanying it.

Vinton, near the Louisiana gulf coast, and about 35 miles east of Beaumont, Tex., produced at the average rate of more than 20,000 barrels a day in February, 1911, but at the close of the year was doing barely more than 3,000 barrels per day. This pool proved to be very limited in area. It is what is known as a salt dome formation, and the oil seems to have been confined to less than 100 acres. The output for the year, 3,232,673 barrels, may be regarded as unusual, considering the restricted limits of the field.

QUANTITY AND VALUE OF OIL PRODUCED IN LOUISIANA TO JAN. 1, 1912.

	Barrels produced.	Value.	Average value per bbl.
1902	547,617	$118,985	$0.344
1903	917,771	416,228	.453
1904	6,718,958	2,438,952	.363
1905	8,910,416	1,601,325	.180
1906	9,077,528	3,577,858	.392
1907	5,068,425	4,114,561	.812
1908	5,573,144	3,455,349	.670
1909	3,224,363	2,227,054	.700
1910	7,290,396	3,771,562	.517
1911	12,784,809	6,736,809	.526
Totals	60,114,427	$28,538,663	$0.474

RUNS OF CRUDE FROM ALL LOUISIANA FIELDS TO JANUARY 1, 1912.

	Jennings.	Welsh.	Anse la Butte.
1902	548,617	.....	.....
1903	892,000	25,162	.....
1904	6,683,066	35,892	.....
1905	8,891,416	10,000	9,000
1906	9,025,174	23,906	23,708
1907	4,895,905	47,316	76,938
1908	4,856,619	31,555	184,763
1909	2,170,454	26,640	42,043
1910	1,486,647	47,000	31,726
1911	1,123,124	40,150	29,200
Totals	40,573,631	287,711	397,378
	Caddo.	Vinton.	Total.
1902	.....	.....	548,617
1903	.....	.....	917,771
1904	.....	.....	6,718,958
1905	4,650	.....	8,915,066
1906	.....	.....	9,072,878
1907	48,266	.....	5,068,425
1908	499,937	.....	5,572,874
1909	985,226	.....	3,224,363
1910	5,654,114	70,909	7,290,396
1911	8,359,662	3,232,673	12,784,809
Totals	15,551,855	3,303,582	60,114,157

RUNS OF ALL OIL FROM ALL LOUISIANA DISTRICTS, 1911.

	Caddo.	Vinton.	Welsh and Jennings.	Anse la Butte.	Total.
Jan.	537,527	372,336	114,965	5,890	1,030,718
Feb.	422,511	597,870	101,544	5,320	1,127,245
Mar.	579,952	528,885	100,859	5,890	1,215,586
April	573,378	232,328	101,667	5,700	913,073
May	669,580	356,503	96,975	5,890	1,128,948
June	803,912	244,678	78,549	5,700	1,132,839
July	840,102	202,333	82,204	5,890	1,130,529
Aug.	688,949	154,453	85,220	5,890	934,512
Sept.	875,186	166,627	94,577	5,700	1,142,090
Oct.	922,749	148,854	92,755	5,890	1,170,988
Nov.	779,123	170,141	76,212	5,700	991,176
Dec.	666,673	97,665	97,597	5,890	867,825
Ttl.	8,359,662	3,232,673	1,123,124	69,350	12,784,809

Texas and Louisiana Well Statistics.

WELLS COMPLETED IN TEXAS DISTRICTS IN 1911.

Coastal Fields—Heavy Oil.

District.	Wells completed.	Producers.	Initial output, barrels.	Dry holes.
Spindletop	83	47	7,653	36
Humble	146	103	3,738	43
Sour Lake	87	63	2,976	24
Saratoga	57	46	2,251	11
Batson	43	30	773	13
Markham	32	22	6,870	10
Totals	448	311	24,261	137

North Texas Fields—Light Oil.

District.	Wells completed.	Producers.	Initial output, barrels.	Dry holes.
Electrac	52	50	17,110	2

Records of Corsicana and Petrolia (Henrietta) not available.

Totals All Texas Fields—Heavy and Light Oil.

	Wells completed.	Producers.	Initial output, barrels.	Dry holes.
All districts	500	361	41,371	139

WELLS COMPLETED IN LOUISIANA DISTRICTS IN 1911.

Coastal Fields—Heavy Oil.

District.	Wells completed.	Producers.	Initial output, barrels.	Dry holes.
Vinton	94	46	72,405	48
Jennings	7	6	1,105	1
Totals	101	52	73,510	49

Caddo Field—Light and Heavy Oil.

District.	Wells completed.	Producers.	Initial output, barrels.	Dry holes.
Caddo	363	288	133,173	*75

Total All Louisiana Fields—Light and Heavy Oil

	Wells completed.	Producers.	Initial output, barrels.	Dry holes.
All districts	464	340	206,683	124

* Includes gas wells.

TEXAS.

COSTAL DISTRICTS.

In the principal Gulf Coast districts of Texas 448 wells were completed in 1911, of this number 211 being producers with initial output of 24,261 barrels, averaging 78 barrels to the well, and 137 dry. Humble led in number of completions with 146, of which 103 were producers credited with 3,738 barrels initial output, and 43 were dry. Spindletop with 83 completions, of which 47 were producers and 36 dry, led in quantity of initial output, being credited with 7,653 barrels, an average of 164 barrels to the well. Markham with 32 completions, 22 of which were producers and 10 dry, is credited with 6,870 barrels gross initial output. This field leads in average initial output, the figures showing 312 barrels to the well. Saratoga made the best showing in percentage of producing wells with 46 out of a total of 57 completed, and initial output of 2,251 barrels, averaging 49 barrels to the well. Sour Lake completed 87 wells, 63 being producers with initial output of 2,976 barrels and 24 dry. Batson is lowest in quantity of new production, with 773 barrels from 30 producing wells, an average of 26 barrels to the well. Thirteen dry holes were completed in this field during the year.

Drilling in 1911 failed to maintain the average of 1910's production in the Texas, Gulf Coast districts. At the close of 1911 the daily output of the six principal fields was placed at 18,370 barrels as against 27,058 barrels at the close of 1910.

NORTH TEXAS WELL COMPLETIONS.

Electra, in Wichita County, reported 52 completions in the nine months beginning April 1, when the discovery well was drilled in by the Clayco Oil & Pipe Line Company, later taken over by the Corsicana Petroleum Company. This district was easily the center of greatest interest in drilling operations in Texas during the last six months of the year. Of the total number of completions only 2 were dry, the 50 producing wells being credited with 17,110 barrels initial output, an average of 342 barrels to the well. The excellent quality of the oil—light crude, testing 42 gravity, Beaume scale—furnished an added attraction.

LOUISIANA.

CADDO.

Caddo witnessed its most active year in 1911, being credited with 363 completions, or at the rate of nearly one a day, 288 being producers with 133,173 barrels initial output, and 75 dry and gas. The producers averaged 462 barrels to the well. It is characteristic of the Caddo field that new wells frequently show an immense output, one last year making 2,000 barrels an hour at the start, but they usually decline in a few days or weeks. This condition is reflected in the average of daily production of the field during the year, which was a few barrels under 23,000 barrels. The highest average in any one month was attained in October, when the output was just a little under 30,000 barrels for the 31 days. In December the production averaged between 21,000 and 22,000 barrels per day. Five-sixths of the Caddo oil is light crude, testing from 42 to 44 degrees gravity, Beaume scale. The remainder is heavy oil, which requires treating before it becomes marketable as fuel.

COSTAL DISTRICTS.

Vinton was the feature in drilling operations in the Louisiana coastal districts, being credited with 94 completions, of which 46 were producers having initial output of 72,405 barrels, an average of 1,574 barrels to the well, and 48 were dry. Development in this field reached its height in February, when production averaged over 20,000 barrels a day. At the close of the year the average daily output was only a little better than 3,000 barrels.

Jennings completed seven wells during the year, 6 being producers with initial output of 1,105 barrels and one dry.

CALIFORNIA FIELDS.

California maintained its position at the head of the column during 1911, as it had for several years previous,

and the oil world is beginning to wonder what the actual possibilities of California's petroleum resources are. The sensational record made in the year 1910 has been outdone, and the statement that California is capable of producing 100,000,000 barrels of oil in twelve months is not looked upon as the talk of the boomer. It is probably true that it could be done if that much oil were needed.

While the year just closed did not furnish another Lakeview gusher, it furnished enough other great wells to exceed the previous year's output by over 6,000,000 barrels. It may be pertinent to state that during 1910 nearly 8,000,000 barrels of the State's entire output came from one well, Lakeview No. 1, so it is seen that during 1911 the State has developed more steady production than it did in the previous year.

Notwithstanding the big increase in production during 1911, stocks did not increase to the extent that they did the year previous. In 1910 stocks increased over 12,000,000 barrels. In 1911 the increase was less than 10,000,000 barrels. This was due to the substantial increase in consumption, which was 7,000,000 barrels more in 1911 than it was in 1910.

Owing to the big overproduction and the rapid increase in stocks efforts were made during the last three or four months of the year to curtail field developments and cut down production to the minimum, but not much was accomplished along this line. The overproduction at the opening of the year was approximately 25,000 barrels a day and for the month of December it was 14,000 barrels a day, but in the intervening months it fluctuated considerably and in March reached 64,500 barrels. In the face of these conditions it was impossible for the operators to arrive at any agreement on a policy of retrenchment.

As a matter of fact operators in California are divided as to what constitutes a "comfortable surplus." Many of them insist that there should be 50,000,000 barrels of storage oil available before any attempt is made to go after the trade which for example embraces the adoption of fuel oil by a number of large steamship lines and the large ships of the navy, and which it is predicted will be one of the results of the opening of the Panama Canal. Other operators, more conservative, believe the surplus now on hand—some 43,000,000 barrels—is ample, with the present production, to guarantee deliveries on any contract that might be made either with the United States Governmen or a private line of steamships.

Nevertheless, it is conceded that the moment consumption figures exceed or even equal that of the output in this State there will be as great a rush as ever to the fields, and that another boom will be inaugurated.

The surplus during the year has all been taken care of and provision is being made by the three large marketing concerns to care for millions of barrels more.

The business has developed more systematically during the past year than at any previous period and practically the entire production of the State is now handled by the three large concerns—the Standard, the Associated and the Union-Independent Agency. Recent developments seem to indicate a "working agreement" between the Standard and the Associated in competition with the Union-Independents. The Standard is primarily a refiner, and as such is after the high grade stuff. The Associated is a marketer of fuel oil and supplies, among its other customers, the railroads on this coast with their liquid fuel. Both of these concerns have a big production of their own, both of the light oil and the heavy grades. A recent announcement shows that the Associated is selling its light product to the Standard and taking as payment its equivalent in heavy fuel oil. The Union Oil Company on the other hand is a refiner and also a marketer of fuel oil and, as it also has a big output of its own and handles the output of the Independent Agency, its position seems secure, and there will no doubt continue to be at least two large marketing agencies on the coast. Nothing has been heard recently of the Shell interests and it is generally believed that this powerful competitor of the Standard has deferred its onslaught on the markets here, at least for a season. There is, however, a representation of the Shell interests still in this State, presumably making arrangements for the establishment of sales agencies at advantageous points along the coast.

Prices during the year have not varied much from those of the previous year, 30c. being the lowest price paid for the heavy fuel product below 19 degrees gravity. From this the oil has a graded value up to $1.10 per barrel, according to its gravity. That prices have been maintained at these figures was no doubt due to the Independent Producers' Agency, which is still a powerful factor in the industry, controlling as it does, about 60 per cent. of the entire State's output. The agency members have been obliged to store a considerable portion of their production during the year, but have preferred to do this rather than flood the market and pound down the price. And at the present time plans are being perfected to provide themselves with 10,000,000 barrels of additional storage. This will give the Union-Independent combine a total storage capacity of nearly 25,000,000 barrels, and will place it in a position to compete for contracts in any amount desired.

PRODUCTION.

The total production of the California fields for 1911, was 83,743,724 barrels. According to the estimates made by the United States Geological Survey, the total output of the country was 217,000,000 barrels. California, therefore, produced nearly three-eighths of the entire amount. It overlapped the mid-Continent fields by 27,000,000 barrels, and was nearly three times as great as the output of the Appalachian fields, which produced approximately 28,000,000 barrels.

California's output for 1911 shows an increase over the previous year of 6,046,156 barrels, when it reached a total of 77,697,568 barrels. The monthly average for 1911 was 6,978,644 barrels, as compared with 6,474,797 barrels in 1910. The daily average production for the month of January, 1911, was 211,810 barrels, and in December it reached 240,195 barrels, the largest of any month during the year.

In the table given below of production by months it will be seen that the output increased gradually, practically during every month of the year.

This immense amount of oil was produced from the established fields, only 154,960 barrels of the total being credited to a new field—the Lost Hills district, which was opened during the year.

PRODUCTION BY MONTHS.

	1910.	1911.
January	5,183,150	6,566,110
February	4,875,711	5,973,206
March	6,022,624	7,089,955
April	6,580,510	6,929,337
May	6,905,825	7,113,466
June	7,126,544	6,694,078
July	7,207,890	6,937,802
August	7,368,320	7,208,984
September	6,858,028	7,291,254
October	6,552,281	7,283,134
November	6,323,189	7,210,297
December	6,603,496	7,446,041
Totals	77,697,568	83,743,724
Monthly average	6,474,797	6,978,644

A comparison of the output by fields for the years 1910 and 1911 shows a remarkable vitality in many of the districts. The fields of the San Joaquin Valley produced 65,181,453 barrels of the total. The Sunset-Midway field alone produced 27,141,671 barrels, an increase of nearly 7,000,000 barrels over its last year's output. This is one of the greatest oil fields in the world and judging from the territory already proven it could produce the same amount for years to come. There are thousands of acres that are yet untouched which are believed to be as productive as any that have been drilled. The average of the wells here is nearly 120 barrels a day. There is a belt running through this field called the "Gusher Belt," where scores of sensational wells have been brought in and which is likely at any time to furnish a 10,000-barrel well. How long this will continue it is impossible to say, but it has been going on now for nearly two years and the gas pressure does not appear to have been diminished to any extent.

The output for the Coalinga field shows a slight decline as compared with its 1910 output, but this is due to a congested condition in the field for several months, when the oil could not be moved and a number of companies were obliged to shut down. The total year's output was 18,323,700 barrels and the December production was in excess of any month of the year except one. This field has not by any means reached the limit of its producing capacity, and the coming year will probably show an increased output. The territory is not only being extended, but a second sand has been discovered in the centre of the old field, that is more prolific than the first sand. The extension of the producing area to the south has been demonstrated within the past two months, making it certain that a prolific sand underlies a large extent of territory.

The remarkable vitality of the "old reliable" Kern River field is again demonstrated by its output for the year, which is 14,083,590 barrels, practically the same as for the year previous. This field is very small in area, extending not over four miles north and south and the same east and west, but the life of the wells, which are among the oldest of any of the larger fields, makes it one of the most remarkable fields ever discovered. In this small area there have probably been drilled more than two thousand wells, and the number still producing is in excess of 1,600.

McKittrick shows an increase in output over 1910 of about 100,000 barrels. This comes from the new Belle Ridge district, which is in fact an extension of the north McKittrick belt. It was only during the latter months of the year that the Belle Ridge came into existence, but the showing so far indicates that a big production may be expected with further drilling.

The Lost Hills is on the map as a real oil field and is credited during its life (four months) with 154,960 barrels. The belt seems very narrow and only further drilling will show the extent and capabilities of the field. All the large concerns have gone into the field, and there is more activity there than in any other valley field considering the uncertainties.

Among the coast districts all but the Watsonville field show a gain for the year. Santa Maria has been given new life by developments in Cat Canyon, where some big wells have been drilled in.. This district, however, is still an unknown quantity. The oil is heavy—running about 10 degrees in gravity—and operators have no end of trouble in getting the wells to produce after they are in the sand. But three or four wells of the twenty or more that have been drilled have been successful producers, but these have been great performers and are the warrant for further operations. The old Santa Maria field also is "picking up," and during the close of the year three wells were brought in that give promise of extending the field and increasing the output. Some headway has also been made against the water that threatened at one time to destroy the entire field.

The Fullerton-La Habra district is the leader of the southern fields and is destined to be one of the greatest fields in the state. There is more real oil excitement in this district just now than any where else in the state. The field is credited with a total output of 5,978,754 barrels for the year as compared with 5,052,758 barrels in 1910, and there is no doubt that the output for 1912 will far exceed these figures. The Salt Lake-Los Angeles field is gradually falling off and is a half million barrels short of its 1910 output, in spite of all efforts to extend the field toward the west. The limits of the field seem pretty well defined and there is little doubt that it will continue to decline. The Whittier district, including the Coyote Hills, was a surprise in that it failed to equal its 1910 record. A great deal of drilling has been done here but the results have not been satisfactory.

The producing area is limited, but it was thought a new and very prolific sand had been found which would increase the output. One good well was brought in in this sand, but further efforts were disappointing. The field was 100,000 barrels short of its 1910 output.

With the exception of Santa Paula field all the other southern districts fell off. The Santa Paula field shows a gain during the year of nearly 100,000 barrels. There has been a great deal of drilling during the year and there will continue to be, as there is a big demand for the light oil produced here.

The comparative figures for the different fields for the years 1910 and 1911 are as follows:—

PRODUCTION BY FIELDS.

Valley—	1910.	1911.
Sunset-Midway	20,578,408	27,141,671
Coalinga	18,969,356	18,323,700
Kern River	14,493,588	14,083,590
McKittrick	5,388,058	5,477,532
Lost Hills	....	154,960
Coast—		
Santa Maria	6,538,000	6,670,074
Lompoc	698,800	795,000
Arroyo Grande	8,920	20,500
Watsonville	72,830	40,850
Summerland	28,190	69,255
South—		
Fullerton	5,052,758	5,978,754
Los Angeles-Salt Lake	3,726,363	3,223,661
Whittier-Coyote	1,169,522	1,069,437
Santa Paula	480,182	516,675
Newhall	163,101	146,110
Puenta	39,460	31,955
Totals	77,707,546	83,743,724

The output of the various fields one year ago and at the close of the year is given below. This does not give an idea of the capacity of the fields but their actual output for the last month of the year under the present depressed conditions.

Fields.	Production, Dec., 1910.	Production, Dec., 1911.
Valley—		
Sunset-Midway	1,721,244	2,618,102
Coalinga	1,612,220	1,598,335
Kern River	1,244,650	1,082,675
McKittrick	525,634	505,431
Lost Hills	....	44,395
Coast—		
Santa Maria	553,860	565,176
Lompoc	77,500	71,500
Arroyo Grande	4,000	2,650
Watsonville	2,170	3,720
Summerland	5,900	3,790
South—		
Fullerton	408,220	512,697
Los Angeles-Salt Lake	289,828	259,639
Whittier-Coyote	96,838	112,169
Santa Paula	43,385	50,807
Newhall	15,007	10,405
Puente	3,100	2,550

The average price per barrel for the year production is a little less than for the previous year, and although the output was increased, the value of the product did not equal that of last year. Figured on a basis of 45 cents average per barrel, the value of the 1911 output was $37,683,875.80. Even this, however, again surpasses any industry in the State in value, including the gold and citrus fruit.

The figures below give the output and its value from the year 1900, when the business first began to assume formidable proportions.

The total output for the California fields since the begining of 1900 to the close of 1911 was 455,634,789 barrels, having a valuation of $197,969,098.

Following is the output and its value for the years mentioned:—

Year.	Production.	Value.
1900	4,329,950	$4,152,928
1901	7,710,315	2,961,102
1902	14,336,910	4,092,189
1903	24,340,839	7,313,271
1904	29,736,003	8,317,809
1905	34,275,701	9,007,820
1906	32,624,000	9,238,020
1907	40,311,171	16,783,943
1908	48,306,910	26,566,481
1909	58,191,720	32,398,187
1910	77,707,546	38,853,773
1911	83,743,724	37,683,875
Totals	455,634,789	$197,969,098

CONSUMPTION.

There was a very substantial increase in consumption during the year, although it did not keep pace with the increased output. The total consumption for the year was 73,155,850 barrels, as compared with 65,863,165 barrels for 1910, showing an increase of 7,292,685 barrels for the year. The increase was steady, although not rapid throughout the year, and the last month showed over 1,000,000 barrels gain over January. The production for the year exceeded, even with the increase in consumption, the latter by 10,587,874 barrels, and this amount represents what went into storage. The prospects for increased consumption are unusually bright, owing to expanding markets in the Northwest, around Puget Sound. The railroads centering there and several of the steamship lines have only recently adopted liquid fuel, and this use is sure to increase. What the opening of the Panama Canal may mean in this connection is only speculation. The asphalt manufacturers are banking largely on the canal as a means of lower transportation and a consequent increase in their eastern trade. They will be able, they say, to compete with the Trinidad product, a thing they cannot very well do under present conditions.

The industrial expansion on this coast, as a result of the opening of the canal, is also looked on as a means of a greatly enlarged fuel oil market. This market, as a matter of fact, is already expanding, and as population increases the demand will increase.

The increase in consumption toward the close of the year and the decline in production give hopes that early in the present year the big marketers will be drawing in their stocks.

Following are the figures by months:—

CONSUMPTION BY MONTHS.

	1910.	1911.
January	5,097,550	5,800,000
February	5,434,125	5,162,228
March	5,679,475	5,087,551
April	5,445,235	6,095,113
May	5,424,800	6,434,136
June	5,306,150	5,905,036
July	5,542,900	5,897,048
August	5,530,125	6,406,113
September	5,323,125	6,369,518
October	5,704,980	6,701,693
November	5,714,700	6,301,982
December	5,700,000	6,995,432
Totals	65,863,165	73,155,850
Increase for the year		7,292,685
Monthly average, 1910		5,488,597
Monthly average, 1911		6,096,320

STOCKS.

At the beginning of the year the total stocks amounted to 32,158,408 barrels. On December 31, 1911, there were in storage 42,699,502 barrels, an increase of 10,541,094 barrels.

As stated above, however, there are many oil men who see no menace in a 42,000,000 barrel surplus. But a time will come when the purchasing agencies will refuse to build more storage. In fact, the Standard has already served notice that it will hereafter refuse to take any more oil from a company than that actually called for in its contract. Up to this time the Standard has been running all the oil produced by a company with whom it had contracts, irrespective of the amount called for in the contract. These companies took advantage of this liberal policy and rushed ahead on new work until they killed the goose that laid the golden egg, so to speak. Now they will be obliged to store their own oil or shut down, and thus the Standard has effected a curtailment in output and new work that should result in better conditions.

The Independent Agency members are now making plans to increase their storage facilities by the addition of 10,000,000 barrels more of tankage and reservoirs on their tank farm site at San Luis Obispo. The Associated also is adding to its storage room by the construction of reservoirs in the Coalinga field having a combined capacity of 3,000,000 barrels.

It may be noted that at the present rate of consumption, about 7,000,000 barrels per month, there is only a six months' supply of oil now on top of ground. That consumption will increase rather than diminish in the coming months is certain, and this is the warrant for keeping stocks up. The fact that oil in California is considered the same as coal in Pennsylvania, a big reserve supply is necessary to insure deliveries, and it is not improbable that stocks will be increased during the present year to 50,000,000 barrels.

The increase during 1911 is as follows:—

INCREASE IN STOCKS.

	Barrels.
January 1	32,158,408
January 31	32,877,485
February 28	33,688,468
March 31	35,690,872
April 30	36,525,096
May 31	37,204,426
June 30	37,993,468
July 31	39,034,282
August 31	39,837,101
September 30	40,758,837
October 31	41,340,578
November 30	42,248,893
December 31	42,699,502
Increase for year	10,541,094

Although no accurate figures on the distribution of the storage oil is ob-

tainable, it is estimated that it is distributed approximately as follows:—

	Barrels.
Standard Oil Company	25,000,000
Union-Independents	15,000,000
Associated	3,000,000
Field storage	1,699,502

Unfortunately, none of the marketing concerns, except the Standard, is willing to give its runs and shipments out for publication, and it is not possible to give complete figures. The Standard, however, publishes its runs and shipments weekly. The company's total runs for the year amounted to 22,491,561 barrels, nearly one-fourth of the State's entire production. This is an increase over its runs the previous year of 7,000,000 barrels, and indicates the growth in the company's business. The company's shipments for 1911 were 15,356,880 barrels, which exceeds its 1910 shipments by 4,000,000 barrels and was more than the company's total runs for 1910. The company tanked during the year 7,134,681 barrels.

The gradual increase in the runs from month to month during the year shows that the Standard is gradually getting control of a larger percentage of the total output, but the company has a very large production of its own, and aims to depend less on the independent producer. The company until less than a year ago never paid any attention to the Southern fields, but early in 1911 it commenced operations in the Fullerton-Whitten districts, and has made things hum there since. It laid a line connecting these districts with its new refinery at El Segundo, and ran its first oil through the line on November 7. Since then it has run nearly 350,000 barrels from these fields. Up to that time the Union had controlled the entire output of these districts with the exception of two or three concerns that marketed their own oil. The Standard's runs from the Sunset-Midway field averaged more than 1,250,000 barrels a month. Most of its own production is located here. The runs from the Santa Maria field fell off about 40,000 barrels a month.

The runs and shipments during the year are as follows:—

	Runs.	Shipments.	Tanked.
January	1,530,059	1,006,204	523,855
February	1,396,281	908,381	489,900
March	1,793,355	1,063,764	729,591
April	1,805,130	1,173,413	631,717
May	1,816,504	1,202,183	614,321
June	1,746,772	1,191,948	554,824
July	1,909,141	1,343,390	565,751
August	2,037,873	1,442,469	595,404
September	2,025,126	1,550,530	474,596
October	2,165,867	1,530,044	635,823
November	2,085,347	1,488,122	597,225
December	2,178,106	1,456,432	721,674
Totals	22,491,561	15,356,880	7,134,681
Monthly average	1,874,297	1,279,740	594,557

FIELD OPERATIONS.

Although the reports show that on December 31, 1911, there were 163 less wells drilling than a year previous, it does not indicate the real amount of drilling that was done, as it was only during the latter part of the year that any serious effect was made to curtail new work. There were on December 31 347 drilling wells that for one reason or another shut down, either temporarily or permanently. The greater number of wells in which work has been suspended were in the Sunset-Midway district, where there are now 179 idle drilling rigs.

One year ago there were 678 wells drilling. On December 31 there were 515. The largest decrease is in the valley fields with the exception of Lost Hills, which shows a gain of 19 during the year. Kern River has practically dropped out of the race so far as drilling is concerned and only 5 wells were being drilled at the close of the year, as compared with 35 a year previous. Sunset-Midway shows a decrease of 90 and Coalinga of 46 in wells drilling. The Fullerton field shows a gain as well as does Whittier.

The wildcatters are not quite as active as they were a year ago.

The comparative statement follows:—

DRILLING WELLS.

Field—	Drilling Dec. 31, 1910.	Drilling Dec. 31, 1911.
Sunset-Midway	276	186
Coalinga	149	103
Kern River	35	5
McKittrick	14	14
Lost Hills	5	24
Coast—		
Santa Maria	41	33
Lompoc	7	6
Arroyo Grande	2	1
Watsonville	2	1
Summerland	..	1
South—		
Fullerton	45	53
Los Angeles-Salt Lake	15	13
Whittier-Coyote	17	23
Santa Paula	34	26
Newhall	6	3
Puente	1	1
Other districts—		
Vallecitos	4	5
Salina Valley	6	2
Scattered	19	12
Totals	678	515
Decrease	..	163

There were just 800 wells completed during the year as compared with 1,013 the year previous, showing an aggregate loss of 213. It will be noted, however, that in the Sunset-Midway district, which furnished the big producers, there were 389 wells completed, as against 325 in 1910. And these wells may be said to account largely for the increased output, although there were a large number of old wells cleaned out and put to producing in different fields, which added to the output. On December 31 there were 5,138 wells producing, as compared with 4,692 a year previous, a gain of 446. There were 129 wells abandoned in all fields during the year, which was only seven less than during 1910. A remarkable feature of this report is the few abandonments in the Los Angeles field, one of the oldest in the State, some of the wells being 20 years old. During the year but ten of these old wells played out. In the Summerland field, the smallest and most unimportant in the State, the wells show remarkable life and although they do not average more than a barrel a day each, not one played out during the year.

Following is the report of completions and abandonments by fields:—

Valley—	Completed.	Abandoned.	Producing Dec. 31.
Sunset-Midway	389	49	754
Coalinga	139	16	763
Kern River	136	26	1,622
McKittrick	36	5	197
Lost Hills	6	..	8
Coast—			
Santa Maria	12	7	160
Lompoc	5	1	24
Arroyo Grande	..	5	5
Watsonville	1	..	5
Summerland	..	..	130
South—			
Fullerton	28	4	254
Los Angeles-Salt L	19	10	680
Whittier-Coyote	6	1	147
Santa Paula	21	3	266
Newhall	2	2	67
Puente	..	..	56
Totals	800	129	5,138
For the year 1910	1,013	136	4,692

The number of wells completed by months during the year in the various fields and the new production reported in each is given below. The new production figures are startling and might lead one to believe that the daily output should show an equivalent increase. But these figures are only the initial output, and fortunately for the business in general. These wells have a habit of sanding up and remaining unproductive for months at a time, and very often, even after they are cleaned out, they never produce up to their initial capacity. The Sunset-Midway, Coalinga, Fullerton and Santa Maria, and also the Salt Lake fields show large in new production, the Sunset-Midway furnishing 95,260 barrels for the year and Coalinga coming second with 18,425 barrels. In the tables below the Lost Hills, Lompoc and Watsonville districts are not given. Of the six wells completed in the Lost Hills the new production amounts to 5,800 barrels a day. At Lompoc five wells were completed and their initial output was 680 barrels. At Watsonville but one well was completed during the year and started at 60 barrels.

SUNSET-MIDWAY.

	Wells completed.	New production. Barrels.
January	34	8,885
February	18	4,910
March	34	8,330
April	39	8,450
May	39	5,167
June	20	4,385
July	34	10,048
August	36	20,025
September	38	8,980
October	33	6,580
November	20	5,520
December	35	3,980
Totals	380	95,260

COALINGA.

	Wells completed.	New production. Barrels.
January	12	1,285
February	13	1,805
March	16	2,260
April	9	1,045
May	11	2,995
June	8	815
July	11	960
August	14	1,860
September	13	1,495
October	11	1,350
November	15	1,960
December	4	595
Totals	139	18,425

KERN RIVER.

	Wells completed.	New production. Barrels.
January	15	150
February	13	155
March	12	105
April	21	210
May	15	150
June	10	140
July	11	110
August	12	220
September	6	55
October	7	150
November	9	265
December	5	80
Totals	136	1,790

McKITTRICK.

	Wells completed.	New production. Barrels.
January	..	....
February	4	300
March	..	....
April	4	215
May	2	150
June	2	60
July	1	75
August	4	350
September	5	285
October	4	185
November	4	210
December	6	1,020
Totals	36	2,850

SANTA MARIA.

	Wells completed.	New production. Barrels.
January	2	350
February	1	200
March	..	....
April	2	165
May	..	....
June	1	15
July	..	....
August	1	10
September	2	200
October	2	1,450
November	..	....
December	3	1,425
Totals	14	3,815

FULLERTON.

	Wells completed.	New production. Barrels.
January	..	....
February	3	450
March	4	2,620
April	1	100
May	4	625
June	3	450
July	1	300
August	2	550
September	4	460
October	..	....
November	2	....
December	4	2,700
Totals	28	8,255

SALT LAKE.

	Wells completed.	New production. Barrels.
January	..	....
February	4	775
March	1	235
April	1	150
May	1	150
June	1	60
July	1	28
August	2	1,075
September	4	610
October	1	60
November	2	110
December	1	45
Totals	19	3,298

WHITTIER-COYOTE.

	Wells completed.	New production. Barrels.
January	..	....
February	..	....
March	..	....
April	1	35
May	..	....
June	..	....
July	..	....
August	1	100
September	3	390
October	1	150
November	..	....
December	..	....
Totals	6	675

SANTA PAULA-NEWHALL.

	Wells completed.	New production. Barrels.
January	..	....
February	3	51
March	..	....
April	1	10
May	3	45
June	2	50
July	2	160
August	1	10
September	4	325
October	3	185
November	1	10
December	3	190
Totals	23	1,045

PRICES.

That prices have not declined to any extent during the year is not a surprise to those familiar with conditions here. The organization of the Independent Producers Agency, which was effected for the purpose of mutual protection, has justified its existence, at least among its own members, for it is due to this organization that prices have been maintained. Had the producers been acting independently of each other there is no doubt a flood of oil would have been thrown on the market that would have completely demoralized prices. The fact is, however, that rather than let their oil go on the market at less than what they considered it worth, the agency members stored a considerable percentage of their production each month, taking it entirely off the market. The Union, which is the distributing and sales agent for the Independents, prorated its own oil with the agency's on all the contracts it held and, although but a portion of their production was sold, in no month of the year did they receive less than 32c. for their oil. Outside companies were obliged to sell their oil for 30c., which was all the Standard or Associated would pay for the heavy grades.

But it is safe to say if less than 30c. had been offered, the outside producers would have made a rush for the agency and got in if possible.

The above does not apply to the Coast or Southern fields, where the marketing conditions and grade of the product differ. In the Southern fields especially the producers have always been protected against the cheap oil from the North by a high transportation rate, and up to the present time have received 70c. per barrel for their heavy oil.

A new element has entered into the situation recently, however, that will no doubt have a tendency to equalize the price in all fields. The Standard now has in operation at El Segundo its new million-dollar refining plant and is at present mining 6,000 barrels a day through its stills.

When the Standard starts to place on the market the "residuum" from this refinery in competition with the dispensers of pure crude prices are bound to drop. The residuum is conceded to be as good or better for fuel than the pure crude, and can be sold at any price the seller cares to accept. That this will soon be on the market is probable, and for this rosin the Southern producer is worrying, and it will not tend to make many new friends for the Standard among the Southern producers. But it was inevitable that prices throughout the State should be equalized to a greater degree than they have been. A mountain range and the rapid growth of the Los Angeles markets have been the factors in keeping up prices in the South. A pipe line from the valley fields over the Telachapi Mountains would have lowered prices long ago if it had been built. The Standard has another way.

The outlook for any better prices than now prevail is not bright, notwithstanding the predictions of the boomers. An indication of this was seen recently in a contract made for a large amount of oil on San Francisco Bay. The Standard captured the contract on its bid of 65c. per barrel, against the bid of the Union Agency of 75c., the present prevailing price. This may incidentally also presage a price war, which the Standard to date has declined to inaugurate. But the 25,000,000 barrels of oil in its storage tanks and the residuum from 35,000 barrels a day treated at its Point Richmond refinery may be some inducement to "start something."

At all events the producers cannot hope for better prices as long as they insist on keeping the drill going at its present rate.

Exports.

Our export trade in petroleum and the products proved a factor of material significance in the events which were destined to play their part in shaping the industry to its more favorable status last year. It is a matter of general computation that the foreign markets afford an outlet of about sixty per cent. of the domestic production, so that their influence enters closely into the general consideration of this review. In the aggregate of exports of crude and the various derivatives during 1911 the record shows an impressive volume, 1,768,831,699 gallons, with a valuation of $105,922,848. There is little doubt that these figures represent our banner year in the history of the indsutry, so far as quantity is concerned, although in value the record of 1908 was not reached. The quantity supremacy over the totals of the three previous years are shown in the following table of comparisons:—

	Gallons.	Value.
1908	1,547,405,401	$108,815,455
1909	1,569,105,378	103,838,590
1910	1,502,491,933	94,107,022
1911	1,768,731,699	105,922,848

The average value per gallon last year was 31c., as compared with 2.9c. in 1910 and 3.6c. in 1909.

Every branch of the indsutry contributed to the more favorable showing of last year, the details of which will be considered in order. In crude we find the official figures as follows:—

	Gallons.	Value.
1908	149,190,017	$6,519,849
1909	170,337,773	6,027,588
1910	180,111,166	5,404,253
1911	201,843,355	6,165,403

Details of monthly shipments of crude follow:—

CRUDE OIL.

	1909. Gallons.	1910. Gallons.	1911. Gallons.
January	15,908,732	12,482,246	16,067,942
February	6,347,896	12,254,233	7,836,140
March	14,950,664	12,411,666	12,398,395
April	15,207,832	14,564,036	19,556,528
May	16,695,958	17,338,626	14,151,753
June	13,188,004	11,814,491	15,934,135
July	10,879,793	16,902,246	21,121,289
August	17,304,694	14,317,178	12,698,504
September	29,981,064	15,327,000	22,166,772
October	14,666,021	19,016,210	23,268,187
November	19,237,964	18,492,433	17,771,228
December	10,936,593	15,190,801	18,872,482
Totals	170,337,773	180,111,166	201,843,355
Average	14,194,814	15,009,264	16,820,280
Total values	$6,027,588	$5,404,253	$6,165,403

The distribution by countries of the yearly aggregates is shown by the following summary:—

	1909. Gallons.	1910. Gallons.	1911. Gallons.
France	23,039,805	18,037,517	27,235,037
Spain*	.....	.....	10,270,365
Other Europe	29,333,851	9,247,349	2,199,938
Canada	30,724,399	47,658,430	66,806,266
Panama*	.....	.....	36,843,880
Mexico	35,507,689	33,117,008	22,611,875
Cuba	5,138,935	4,071,393	6,759,323
Chile*	.....	.....	19,454,000
Other countries	46,594,594	67,979,469	1,156,538

*Not separately stated prior to July 1, 1911.

Of most impressive consideration is the export trade in the illuminant products, for it is in this item that the campaign of refiners is waged to its acutest stage. In quantity this product comprised about seven-elevenths of the total petroleum exports last year, while in value it represented nearly fifty per cent. of the total and about sixty per cent. of the varieties of refined classification.

While the 1911 record marks a substantial growth, so far as quantity is concerned, it failed to approach the valuation level of 1909, and in both respects it suffers by comparison with 1908. The following figures are self-explanatory:—

	Gallons.	Value.
1908	1,129,004,883	$75,988,250
1909	1,046,401,072	67,814,406
1910	940,247,039	55,642,368
1911	1,112,295,006	61,055,095

The average value per gallon was 5.4c. in 1911, as compared with 5.9c. in 1910 and 6.4c. in 1909.

Details of the shipments by months for the last three years follow:—

ILLUMINATING OILS.

	1909. Gallons.	1910. Gallons.	1911. Gallons.
January	83,373,442	63,087,737	64,373,587
February	69,629,574	66,692,396	86,788,390
March	98,158,919	90,494,490	101,203,206
April	85,671,114	75,795,820	93,810,690
May	76,182,223	86,082,216	100,606,810
June	95,478,321	84,966,389	102,429,736
July	90,266,602	78,405,765	111,119,039
August	84,182,608	88,212,524	101,763,597
September	102,249,856	78,127,631	106,301,973
October	89,612,404	79,128,721	90,097,693
November	91,329,046	75,026,395	67,175,629
December	78,158,814	79,226,146	85,672,015
Totals	1,046,401,072	940,247,039	1,112,295,006
Average	87,200,089	78,353,919	82,691,251
Total values	$67,814,406	$55,642,368	$61,055,095

The distribution by countries of the yearly totals is appended:—

Exported to—	1909. Gallons.	1910. Gallons.	1911. Gallons.
U. Kingdom	200,456,628	186,611,531	166,935,516
Belgium	53,507,567	40,219,617	53,519,674
Denmark	22,463,718	22,274,894	25,988,224
France	68,254,329	35,765,936	39,648,623
Germany	127,211,113	109,966,074	122,333,040
Italy	25,967,155	26,522,267	25,831,893
Netherlands	24,027,226	18,472,132	16,415,389
Sweden	134,742,244	22,474,230	24,062,922
Other Europe	26,955,405	25,548,663	28,228,573
Canada	10,683,240	8,056,532	13,835,775
Cuba	205,331	2,557,376	540,224
Other W. Indies and Bermuda	5,169,239	5,740,241	6,006,049
Argentina	16,525,810	19,684,675	22,088,305
Brazil	28,572,897	33,667,056	28,326,311
Chile	6,951,159	7,828,471	6,771,036
Other S. Amer.	10,527,606	11,411,340	10,291,589
Chinese Empire	65,705,865	84,019,462	100,770,779
British India	43,629,593	35,456,508	69,765,850
Dutch E. Indies	17,624,171	16,398,750	15,177,590
Hong Kong	11,643,945	8,418,398	18,089,993
Japan	72,052,851	46,513,328	97,661,576
British Oceania	27,709,878	23,236,879	34,050,287
Philippine Isls.	5,995,090	10,643,804	11,653,570
British Africa	17,179,450	15,360,782	13,728,175
Other countries	22,061,942	44,862,044	62,516,686
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New records were made last year in the foreign trade of the products of the naphtha classification, and the gain was proportionately greater than that in any other of the petroleum items. It is indeed a gratifying showing that the 1911 figures mark an increase of practically one hundred per cent. in an interval of two years, and that the march of values has been consistent with that of quantities. The following basis of comparisons is significant:—

	Gallons.	Values.
1908	43,889,844	$4,642,551
1909	68,758,675	5,799,994
1910	100,695,382	8,407,102
1911	137,294,606	11,482,761

The average value per gallon last year was 8.3 cents, as compared with 8.2 cents in 1910 and 8.3 cents in 1909.

Details of monthly shipments follow:—

NAPHTHAS.

	1909. Gallons.	1910. Gallons.	1911. Gallons.
January	6,437,543	5,371,652	3,207,987
February	1,018,752	5,287,142	6,541,599
March	6,591,480	9,158,374	7,420,736
April	10,930,399	8,741,454	12,207,263
May	5,187,590	11,595,261	15,759,654
June	9,368,117	8,272,237	14,563,400
July	7,509,790	11,604,627	12,934,578
August	3,095,702	11,842,737	16,217,330
September	3,133,821	4,949,837	12,927,279
October	4,925,720	7,284,271	16,961,436
November	3,649,571	8,205,701	11,913,090
December	3,381,842	8,982,095	6,611,955
Totals	68,758,675	100,695,382	137,294,606
Average	5,729,889	8,391,282	11,441,217
Total values	$5,799,994	$8,407,102	$11,482,761

The following table shows the distribution by countries for 1911, similar statistics for the previous years not being available:—

Exported to—	1911. Gallons.
United Kingdom	24,230,113
Belgium	6,090,587
Germany	15,400,669
Netherlands	10,131,947
Other Europe	25,493,029
Canada	27,078,329
Argentina	11,701,494
Other countries	19,168,438

There is also the occasion for encouraging comment in the review of the foreign trade in lubricating oils during 1911, the official returns apparently marking a new era of prosperity, as indicated in the following summary:—

	Gallons.	Values.
1908	147,769,024	$18,971,436
1909	161,639,609	20,016,107
1910	163,832,544	20,921,103
1911	183,319,645	23,337,126

The average value per gallon last year was 12.5 cents, as compared with 12.6 cents in 1910 and 12.1 cents in 1909.

Details of monthly shipments for the last three years follow:—

LUBRICATING OILS.

	1909. Gallons.	1910. Gallons.	1911. Gallons.
January	10,654,144	11,480,160	12,344,275
February	10,742,204	11,253,616	14,391,984
March	14,404,378	14,639,117	17,134,225
April	14,315,241	12,168,607	17,382,337
May	10,310,149	14,951,123	12,802,488
June	10,785,732	15,509,893	15,757,158
July	12,716,669	12,711,423	12,831,462
August	12,908,069	16,272,332	12,580,103
September	15,612,451	14,223,793	19,316,736
October	17,557,002	13,061,349	14,216,597
November	16,207,962	14,337,774	18,622,040
December	14,824,640	13,225,357	.....
Totals	161,639,609	163,832,544	183,319,645
Average	13,479,967	13,652,712	15,276,637
Total values	$20,016,107	$20,921,103	$23,337,126

The distribution by countries for the last three years is shown below:—

Exported to—	1909. Gallons.	1910. Gallons.	1911. Gallons.
U. Kingdom	47,689,547	54,037,753	56,387,567
Belgium	11,535,984	9,354,487	11,237,798
France	23,202,084	15,515,777	20,949,694
Germany	20,011,215	19,605,844	21,272,119
Italy	7,117,079	7,510,721	8,251,097
Netherlands	10,094,495	8,911,763	12,063,446
Other Europe	7,753,636	8,281,434	10,117,001
Canada	3,378,675	4,564,003	5,436,754
Mexico	1,298,152	1,371,071	1,336,741
Cuba	1,109,658	1,331,390	1,266,724
Argentina	3,027,713	3,080,428	4,719,263
Brazil	1,878,209	1,926,227	2,140,712
Chile	1,392,324	1,700,034	1,518,453
Br. East Indies	8,703,118	7,424,781	8,196,746
Japan	2,232,253	2,999,795	2,930,122
British Oceania	3,263,455	4,282,968	4,649,710
British Africa	2,423,875	1,997,322	1,763,414
Other countries	5,728,157	9,936,686	8,484,687

In the classification of exports of residuum comprising the various products from which the light constituents have been distilled, we also find gains in quantity and value last year, as compared with the returns for the previous years, but the more recent showing does not approach in significance that of any of the more important derivatives. A summary of residuum exports follows:—

	Gallons.	Values.
1908	77,551,083	$2,793,363
1909	121,966,249	4,180,495
1910	117,605,802	3,732,196
1911	133,979,087	3,882,463

Average values per gallon were 2.9 cents in 1911, 3.1 cents in 1910 and 3.4 cents in 1909.

Monthly shipments of residuum are shown in the following table:—

RESIDUUM.

	1909. Gallons.	1910. Gallons.	1911. Gallons.
January	8,674,142	8,186,039	15,444,121
February	3,981,530	8,406,713	6,422,316
March	5,328,234	6,189,819	15,308,597
April	15,875,119	12,875,088	11,257,676
May	9,101,857	9,677,895	1,308,286
June	11,387,114	11,101,386	8,547,690
July	7,495,928	9,053,057	12,757,040
August	9,383,124	11,565,367	18,110,185
September	7,464,327	15,353,854	8,342,316
October	6,798,675	8,121,288	10,172,067
November	8,604,142	12,889,380	13,479,298
December	10,450,991	4,184,856	8,754,421
Totals	121,966,249	117,605,802	133,979,087
Average	10,163,854	9,800,485	11,164,924
Total values	$4,180,495	$3,732,196	$3,882,463

TOTAL EXPORTS OF CRUDE AND PRODUCTS.

	1909. Gallons.	1910. Gallons.	1911. Gallons.
Jan.	125,048,003	100,607,894	109,437,912
Feb.	91,719,956	103,894,100	121,980,429
March	139,433,675	132,894,406	153,465,159
April	141,999,696	124,145,014	154,214,494
May	117,477,777	139,645,121	140,628,991
June	140,207,288	131,664,396	157,232,119
July	126,868,782	123,078,112	170,765,408
Aug.	127,384,137	142,209,938	161,569,719
Sept.	156,441,251	127,982,115	164,055,076
Oct.	133,499,602	126,611,839	154,715,980
Nov	139,028,685	128,949,683	126,279,425
Dec.	117,652,880	120,809,255	138,532,913
Totals	1,569,103,378	1,502,491,933	1,768,731,639
Average	130,925,281	125,207,661	147,394,308
Tot. val.	$163,838,599	$94,107,022	$105,922,848

FOREIGN FIELDS.

Roumanian Petroleum Review.

The petroleum industry continued its peaceful and regular development during 1911. The year just passed can be looked at as one that marked a progress in every direction, in field operations as well as in the refining work and the marketing of the products. Great activity has been displayed in the known oil fields, and strong efforts have been put forth to find new territories. Although at this early period it is not possible to give absolutely correct figures for December, the most available data at this time show the year's production to be 1,535,907 metric tons, as against 1,352,407 tons in 1910, being in excess with 183,500 tons, or 13 per cent., a new record in the country's industry.

The gain in the 1911 production is to a large extent due to the results achieved in Moreni, this field being credited with an output of nearly 570,000 tons, then to the opening of the new oil field, Filipesti-de-padure, and to the increased production in the Dam Cavitza and Buzeo oil fields. The following table shows the crude oil productions by months and districts.

CRUDE OIL PRODUCTION OF ROUMANIA IN 1911 BY MONTHS AND DISTRICTS, AS COMPARED WITH 1910, IN METRIC TONS.

Month.	District Prahova—Moreni.	Bustenari	Bordeni.	Campina.	Other oil fields.
January	38,222	25,132	28,777		9,969
February	25,260	26,003	24,461		10,208
March	32,683	30,527	28,218		12,163
April	35,907	30,158	23,267		10,737
May	39,776	29,599	24,210		14,549
June	48,328	26,300	23,746		22,018
July	57,616	28,253	30,926		12,308
August	58,530	23,848	26,442		16,060
September	64,794	24,555	25,777		19,274
October	71,140	22,587	28,423		16,248
November	57,427	22,840	24,188		15,434
December	38,942	28,473	21,684		19,691
Totals	568,634	318,275	310,119		178,659

Month.	Total of District Prahova. 1910.	1911.
January	114,715	102,100
February	103,032	85,932
March	104,873	103,591
April	104,416	100,069
May	115,504	108,134
June	111,925	120,392
July	112,949	129,103
August	105,002	124,880
September	104,118	134,400
October	93,839	138,407
November	90,766	119,889
December	84,282	108,790
Totals	1,245,421	1,375,687

Month.	District Dambovitza. 1910.	1911.	District Buzen. 1910.	1911.
January	3,168	4,610	2,272	3,515
February	2,586	3,608	1,741	2,974
March	2,523	4,462	2,850	3,535
April	2,828	5,064	2,677	5,088
May	2,610	7,414	3,334	5,679
June	2,695	8,599	3,323	5,541
July	2,852	7,255	3,573	6,154
August	4,060	5,882	4,190	6,994
September	5,578	5,534	4,131	7,755
October	5,889	6,365	4,089	6,614
November	4,594	5,204	3,721	5,065
December	4,312	4,865	3,846	4,916
Totals	43,295	68,752	39,717	63,826

Month.	District Bacau. 1910.	1911.	Total by months. 1910.	1911.
January	1,607	1,947	121,772	112,172
February	1,896	2,055	109,255	94,569
March	2,177	2,036	112,423	113,624
April	2,020	2,085	111,941	112,306
May	2,001	2,333	123,449	123,560
June	1,917	2,248	119,860	136,780
July	2,036	2,425	121,460	144,937
August	2,186	2,841	115,408	140,593
September	2,011	2,419	115,838	149,908
October	1,986	2,242	105,403	153,028
November	1,861	2,640	100,942	132,888
December	2,216	2,271	94,656	120,942
Totals	23,974	27,642	1,352,407	1,535,907

From this table it can be seen that the Prahova district continues to be in the lead of the petroleum producing districts, with an output of 1,375,637 tons, as compared with 1,245,421 in 1910, participating with 89.5 per cent. in the total production of the country. Notwithstanding its excess of 130,000 tons, as compared with 1910, its percentage in the total production of the country is in steady decrease. In 1909 this percentage was of 95 per cent., while it came down to 89.5 in the expired year. This situation is due to the fact that the other oil districts, Dam Cavitza, Buzeo and Bacan, have been developed, in comparison, to a larger extent than the Prahova district.

Dam Cavitza district contributed 68,752 tons to the production, as against 43,295 tons in the preceding year. Buzeo was credited with 63,826 tons, as compared with 39,717 in 1910, and Bacan district, with 27,642, as against 23,974 tons in the previous year.

Among the Roumanian oil fields Moreni was at the front, taking definitely first place, and being by far in advance of the other two principal oil fields in Roumania, Bushtenari and Campina, Moreni's production amounted to 563,600 tons, as compared with 438,400 for 1910, that is, an excess of 130,000 tons, more than 22 per cent., thus participating with 377 in the total production of the country.

Bushtenari comes next with 318,275 tons, showing for the first time since 1908 about the same figure as the preceding year, instead of a continual falling off in its output. This is due to the production of Bordeni, Chiciura and Gropi, which are considered as appertaining to the Bushtenari region.

The third place belongs to Campina, to which the Steaua Romana Company, which owns the greatest part of this field, does not give, for special reasons, all the development it is capable of, preferring to operate intensively and leased properties. The contribution of this field was 310,000 tons, as compared with 333,330 tons for 1910, i. e., a decrease of 23,300 tons. Then come Tzintea, Gura Ocnitzei, Policieri, Orbanasi and Baicoi. The new field, Tilipesti-de-padure, so successfully explored during the year under review by the Astra-Romana Company, with a production of nearly 30,000 tons, opens good prospects for the future of this new region. Besides, several important extensions have been made to the producing areas during the past twelve months. The development of the Roumanian oil fields at the present time, and the progress made during the past year, is illustrated by the following table, which gives the number of wells at the end of 1911 in the several producing localities.

SITUATION OF WELLS ON NOVEMBER 30, 1911, AS COMPARED WITH THAT ON DECEMBER 31, 1910.

NOVEMBER 30, 1911.

Oil fields.	Hand Dug Wells—Abandoned.	Drilling.	Producing.
Prahova			
Moreni	..	13	..
Bustenari	236	60	86
Campina	93	6	8
Baicoi	10	3	4
Tzintea	8	1	..
Other fields	126	11	25
Totals of District Prahova	473	84	123

Oil fields.	Hand Dug Wells—Abandoned.	Drilling.	Producing.
Dambovitza			
Gura Ocnitei	53	7	18
Calibasi	47	4	5
Glodini	12	..	43
Other fields	17	1	5
District of Buzeo	54	4	49
District of Bacao	472	31	304
Totals of District Dambovitza	1,128	141	547

Oil fields.	Drilling Wells—Abandoned.	In boring.	Producing.
Prahova			
Moreni	61	40	56
Bustenari	256	74	475
Campina	51	54	126
Baicoi	16	3	13
Tzintea	13	30	28
Other fields	40	17	17
Total of District Prahova	437	208	715

Oil fields.	Drilling Wells—Abandoned.	In boring.	Producing.
Dambovitza.			
Gura Oenitei	19	10	13
Calibasi	6	..	5
Glodini	2	..	..
Other fields	7	..	..
District of Buzeo	15	19	42
District of Bacao	23	7	74
Totals of District Dambovitza	509	254	849

Oil fields.	Hand Dug Wells—Abandoned.	Drilling.	Producing.
Prahova.			
Moreni	..	1	..
Bustenari	183	48	88
Campina	101	4	12
Baicoi	7	1	4
Tzintea	31	2	..
Other fields	130	13	34
Totals of District Prahova	452	69	158

Oil fields.	Hand Dug Wells—Abandoned.	Drilling.	Producing.
Dambovitza.			
Gura Oenitei	35	7	20
Calibasi	36	1	15
Glodini	30	..	28
Other fields	17	1	5
District of Buzeo	63	4	44
District of Bacao	472	25	303
Totals of District Dambovitza	105	107	553

Oil fields.	Drilling Wells—Abandoned.	In boring.	Producing.
Prahova.			
Moreni	54	32	48
Bustenari	145	67	467
Campina	28	63	112
Baicoi	8	3	14
Tzintea	14	30	22
Other fields	28	10	18
Totals of District Prahova	277	205	681

Oil fields.	Drilling Wells—Abandoned.	In boring.	Producing.
Dambovitza.			
Gura Oenitei	15	10	10
Calibasi	6	1	4
Glodeni	1	..	..
Other fields	..	6	1
District of Buzeo	10	16	25
District of Bacao	13	8	78
Totals of District Dambovitza	322	216	809

It will be seen from the above that there has been an increase in the number of drilling wells, and a slight decrease in hand-dug producing wells.

As remarkable events in the operations during the past twelve months can be considered the strike of the Astra-Romana Company's well No. 4, at Filipesti-de-padure, which made powerful eruptions at a depth of 1,060 metres, with an output of more than 1,000 tons a day. This successful boring attracted the attention of operators to this locality, where several wells are now being drilled. Another gusher was completed by the Moreni-Baicai Company at Moreni, which, for a short time, made eruptions producing 1,000 tons per day, and has, one day, reached the extraordinary figure of 3,000 tons.

REFINERIES.

The Roumanian refineries, though not working to their full capacity, showed an increase of their production during the year under review. The following table gives the crude oil treated in the refineries, and the products obtained during 1911, as compared with 1910:—

PRODUCTION OF THE REFINERIES IN ROUMANIA DURING 1911 BY MONTHS, AS COMPARED WITH 1910, IN METRIC TONS.

Months.	Crude oil run 1910.	Crude oil run 1911.
January	101,934	113,389
February	94,027	96,943
March	101,059	108,720
April	107,041	99,342
May	109,987	107,143
June	97,806	103,428
July	99,282	129,985
August	109,166	137,791
September	98,326	116,044
October	94,037	105,312
November	88,926	129,906
December	113,708	137,276
	1,215,299	1,384,573

	Products obtained in 1910—Benzine.	Illuminating oil.	Lubricating oil.	Residuals.
January	20,921	24,221	2,713	52,615
February	18,690	19,724	1,435	53,096
March	21,001	21,548	3,234	52,644
April	19,513	23,957	2,301	60,153
May	19,623	25,941	3,251	57,239
June	16,474	21,248	2,600	55,462
July	17,449	22,549	2,547	55,533
August	18,759	26,394	2,369	60,352
September	19,753	22,655	1,300	53,182
October	20,058	20,921	1,097	56,441
November	18,567	19,581	1,124	48,616
December	19,895	23,483	1,153	67,927
	230,702	272,222	25,064	667,260

	Products obtained in 1911—Benzine.	Illuminating oil.	Lubricating oil.	Residuals.
January	21,747	26,588	1,218	63,836
February	19,735	23,367	1,783	52,058
March	22,791	24,348	1,316	60,255
April	19,303	21,162	1,433	57,444
May	20,683	26,561	1,786	58,113
June	18,110	23,057	2,171	60,090
July	22,852	28,416	2,287	76,430
August	24,741	32,608	2,203	78,239
September	21,416	27,129	2,702	64,797
October	20,170	23,072	1,310	60,760
November	23,477	28,525	4,439	72,759
December	24,521	32,514	2,124	78,117
	259,546	317,347	24,782	782,898

	Total of products obtained during 1910.	Crude oil run 1911
January	100,470	115,110
February	92,945	98,634
March	98,427	110,661
April	105,924	108,913
May	95,784	104,735
June	95,784	104,735
July	98,078	131,985
August	107,814	139,885
September	96,890	118,529
October	92,517	107,177
November	87,888	131,367
December	112,458	139,415
	1,195,249	1,407,828

	Total of products obtained during 1911.	Crude oil run 1911
January	113,389	115,110
February	96,943	98,634
March	108,720	110,661
April	99,342	108,913
May	107,143	104,735
June	103,428	104,735
July	129,985	131,985
August	137,791	139,885
September	116,044	118,529
October	105,312	107,177
November	129,906	131,367
December	137,276	139,415
	1,384,573	1,407,800

It results that 1,407,800 tons crude oil were treated in the various refineries as compared with 1,215,300 tons for the preceding year, i. e., an excess of 192,500 tons, or nearly 16 per cent.

From the 1,407,300 tons crude treated the following quantities of products were obtained:—

	1910.	1911.	Difference.
Benzine	230,702	259,546	+ 28,844
Refined oil	272,222	317,347	+ 45,125
Lubricating oils	25,064	24,782	— 282
Residuals	667,240	782,898	+ 115,838

The percentages are as follows:—

	Average percentage.
Production of Benzine	18.44
Production of refined oil	22.55
Production of lubricating oil	1.76
Production of residuals	55.63

The proportion of residuals is increasing as a consequence of the gain in crude oil production, being exclusively the Moreni crude, containing a great percentage of residuals.

During the period under review some refineries have increased their working

capacity. The new refinery of the Orion Company, at Ploesti, has recently been terminated and started working nearly to its full capacity of 600 tons a day. The Astra-Romana Company, whose production has been considerably increased, had the intention of constructing a big refinery at Constantza, on the Black Sea. However, they were obliged to abandon this idea, having failed to secure the government's authorization to lay a pipe line for crude oil transportation from their producing fields to Constantza. This company is now active to considerably increase their Ploesti refinery, which will be carried to a working capacity of more than 1,000 tons crude a day.

HOME MARKET.

There was nothing of importance to change the general condition of the petroleum market during the past twelve months. The agreement between the leading refineries for the sale of their products in the home market through the Petroleum Distributing Company contirued in a satisfactory way. Several outside standing refineries joined this sales organization for the marketing of their products, while the Distributing Company, which, at present, disposes of a large percentage of the illuminating oil contingent, and sold nearly 70 per cent. of the fuel oil consumption of this country, is extending its organization all over the country by continually erecting new sales stations in various localities, thus contributing to increase the consumption of petroleum products in Roumania. Prices, however, especially for fuel oil, were rather at a low level, owing to the keen competition of a few outside standing firms, who could not come to an agreement with the Distributing Company. The following table gives the prices for crude and refined oil by months, quoted during 1911, as compared with 1910, in the home market, and the prices of refined oil for exports:—

PRICES OF CRUDE AND REFINED OIL DURING 1911, AS COMPARED WITH 1910, BY MONTHS AND FRANCS PER 100 KILOS.

Home Trade.

	Crude oil—Home trade—			
	1911—		1910—	
Month.	Bustenari.	Moreni.	Bustenari.	Moreni.
January	3.30	2.20	3.60	2.90
February	3.50	2.60	3.50	2.50
March	3.60	2.80	3.50	2.50
April	3.60	2.80	3.40	2.40
May	3.85	2.80	3.40	2.50
June	3.65	2.65	3.50	2.70
July	3.60	2.50	3.50	2.70
August	3.55	2.50	3.25	2.20
September	3.55	2.55	3.25	2.20
October	3.65	2.70	3.20	2.20
November	3.60	3.00	3.20	2.20
December	3.55	3.00	3.20	2.20

	Refined oil—			
	Home trade.		Exports.	
	1911.	1910.	1911.	1910.
January	7.80	8.30	5.00	6.00
February	7.80	8.30	5.00	6.00
March	7.80	8.30	5.00	6.00
April	7.80	8.10	5.00	5.50
May	7.80	8.10	5.00	5.50
June	7.80	8.10	5.00	5.50
July	7.80	8.10	5.00	5.25
August	7.80	8.10	5.00	5.25
September	7.80	8.10	5.00	5.00
October	7.80	7.80	5.00	4.75
November	7.80	7.80	5.00	5.00
December	7.80	7.80	5.00	5.00

From the above, it will be seen that the crude oil prices were sustained and rather improved during the past twelve months, while the price for refined oil, which, according to the contingent law, is fixed by the government, remained unchanged at 7.80 francs per 100 kilos. We must observe, however, that during the year under review the government, by a special law, reduced from 12 to 7 francs per 100 kilos the tax of consumption on refined oil. As a consequence of this reduction of 5 francs per 100 kilos, the consumption of illuminating oil shows an increase. The following table gives the quantities of petroleum products delivered to the home consumption in 1911, by months:—

HOME CONSUMPTION IN 1911 BY MONTHS, AS COMPARED WITH 1910, IN TONS.

	Consumption in 1910—					
				Lubricating oil.		
	Benzine—		Illuminating oil.			
	Rectified.	Denatured.		Pure.	Denatured.	Residuals.
Jan.	45	1,196	3,578	409	719	27,848
Feb.	46	1,245	3,653	262	647	27,353
March	55	1,431	2,578	629	1,122	29,724
April	47	1,270	2,093	435	743	28,459
May	66	1,561	2,085	1,006	700	26,426
June	69	2,024	1,909	1,138	822	31,595
July	46	1,615	1,519	703	738	28,501
Aug.	56	1,579	3,215	433	661	31,106
Sept.	80	1,882	4,313	752	976	29,664
Oct.	50	1,758	5,719	319	869	29,903
Nov.	71	2,053	5,696	407	1,082	30,893
Dec.	76	1,993	5,491	489	1,406	38,879
Totals	707	19,607	41,849	7,059	10,485	360,351

	Burnt in refineries in 1910.	Total of home consumption in 1910.
January	9,767	43,562
February	8,550	41,756
March	9,142	44,681
April	8,077	41,124
May	9,018	40,862
June	7,956	45,513
July	8,202	41,324
August	9,030	46,080
September	8,716	46,383
October	9,132	47,827
November	9,945	50,147
December	10,878	59,212
Totals	108,413	548,471

	Consumption in 1911—					
				Lubricating oil.		
	Benzine—		Illuminating oil.			
	Rectified.	Denatured.		Pure.	Denatured.	Residuals.
Jan.	58	1,859	4,153	411	946	32,092
Feb.	46	1,556	3,626	457	1,196	35,295
March	55	1,799	2,295	550	1,394	41,773
April	57	1,539	3,004	698	869	30,514
May	45	2,047	1,918	846	1,070	33,637
June	40	2,053	2,000	1,470	828	35,537
July	82	2,022	2,290	903	945	37,159
Aug.	62	2,190	3,273	654	959	37,877
Sept.	82	2,357	4,840	651	1,249	37,410
Oct.	57	2,161	4,902	572	1,538	38,304
Nov.	96	2,319	6,087	643	1,387	36,185
Dec.	87	2,290	6,123	627	1,415	37,482
Totals	767	24,183	44,511	8,482	13,796	433,265

	Burnt in refineries in 1911.	Total of home consumption in 1911.
January	11,585	51,104
February	10,112	52,288
March	10,159	58,025
April	8,840	45,521
May	9,681	49,244
June	9,179	51,107
July	10,097	53,498
August	10,290	55,305
September	9,711	56,300
October	9,938	57,472
November	11,428	58,136
December	11,514	59,538
Totals	122,534	647,538

From this table it will be seen that the home consumption for every kind of product was in increase during the year under review, as compared with that of the previous year.

Benzine showed an increase of 4,636 tons, illuminating oil showed an increase of 2,662 tons, lubricating oil showed an increase of 4,734 tons, and residuals showed an increase of 72,914 tons.

The total increase of the home consumption amounted to 84,946 tons, excepting the quantity burnt in the refineries. The quantity of crude oil treated having been a larger one, the consumption of fuel in the refineries was also larger, showing an increase of 14,121 tons for 1911.

EXPORTS.

In regard to the export trade, last year established a record, for never before has Roumania's foreign trade reached such great dimensions. Compared with the figures of the previous year, those for 1911 show a gain of 17 per cent., the total quantity of petroleum products exported being nearly 680,000 tons. The great increase is reflective of the broadening demand for residuals which is now finding a good market in several foreign countries. The exports are given in the following table:—

ROUMANIA'S PETROLEUM EXPORTS FOR 1911 BY MONTHS, AS COMPARED WITH 1910 AND 1909, IN TONS.

	Crude, lubricant, gas-oil and residuals.		
Month.	1909.	1910.	1911.
January	7,736	1,249	1,538
February	965	1,636	8,065
March	584	5,834	14,872
April	3,541	7,125	17,117
May	7,305	21,562	28,766
June	2,996	5,793	9,771
July	2,403	8,029	31,235
August	7,058	10,243	31,896
September	2,920	9,224	12,350
October	3,754	6,284	22,619
November	9,478	24,869	33,951
December	5,525	14,375	.....
Totals	54,265	116,223	212,170

	Illuminating oil and distillate.		
Month.	1909.	1910.	1911.
January	21,707	27,452	25,031
February	22,629	29,974	27,221
March	12,567	24,942	22,551
April	19,100	26,348	15,790
May	18,342	25,148	36,623
June	18,542	31,186	33,152
July	26,672	10,577	23,473
August	32,020	36,538	42,689
September	17,518	43,540	21,938
October	33,909	26,934	14,897
November	17,928	25,206	26,292
December	20,613	31,434	.....
Totals	261,637	339,282	289,627

	Crude and refined benzine—		
Month.	1909.	1910.	1911.
January	5,664	4,276	3,293
February	6,179	10,261	11,640
March	12,464	5,359	12,522
April	5,092	19,322	8,801
May	17,659	12,286	4,234
June	3,335	10,882	18,693
July	8,564	4,683	13,327
August	9,127	14,851	11,232
September	2,372	16,599	5,039
October	12,718	7,004	19,536
November	11,806	8,735	2,359
December	13,236	11,493	.....
Totals	108,218	125,751	110,676

	Paraffine—		
Month.	1909.	1910.	1911.
January	22	12	16
February	10	6	67
March	23	17	59
April	18	....	82
May	28	20	12
June	32	4	14
July	141	2	33
August	74	47	29
September	61	38	17
October	61	24	7
November	30	30	27
December	45	85	....
Totals	545	285	363

	Total—		
Month.	1909.	1910.	1911.
January	35,129	32,989	29,878
February	29,783	41,877	46,993
March	25,638	36,152	50,004
April	27,751	52,795	41,760
May	43,334	59,016	69,635
June	24,905	47,865	61,630
July	37,780	23,291	68,068
August	48,279	61,679	85,836
September	22,871	69,401	39,344
October	50,532	40,246	57,059
November	39,242	58,843	62,629
December	39,421	57,387	....
Totals	424,665	581,541	612,836

From this table it results that while the refined oil and the benzine show a falling off, the exports of residuals show a gain of more than 100 per cent., as compared with 1910, and more than 400 per cent. as compared with 1909. The most interesting comparison in the export statistics will be found in the following table, showing the exports of the various products by countries of destination, as compared with those of the preceding years, 1910 and 1909:—

ROUMANIAN PETROLEUM EXPORTS BY COUNTRIES OF DESTINATION FOR THE FIRST ELEVEN MONTHS OF 1911, AS COMPARED WITH THE SAME PERIOD OF 1909 AND 1910.

	Crude lubricant, gas-oil and residuals.		
Countries.	1909.	1910.	1911.
United States of America	.....	.....	.....
Algiers	.....	.....	.....
Germany	350	208	4,837
England	15,893	44,184	74,726
Austro-Hungary	2,050	22,509	34,944
Belgium	83	90	8,950
Bulgaria	2,150	1,628	2,992
Egypt	10	3,909	29,388
France	4,923	5,880	13,698
Greece	.....	.....	724
Holland	7,239	30	17
Italy	9,902	4,627	16,751
Japan	.....	12,438	1,549
Norway	3,957	4,018	8,413
Servia	242	66	887
Sweden-Denmark	.....	1	3,726
Switzerland	.....	.....	.....
Turkey	1,872	2,239	2,745
Spain	50	.....	538
Tunis	.....	.....	7,864
Totals	48,743	101,848	212,849

	Illuminating oil and distillate.		
Countries.	1909.	1910.	1911.
United States of America	.....	2,353	4,007
Algiers	.....	.....	.....
Germany	17,382	23,627	24,901
England	44,596	56,679	79,072
Austro-Hungary	2	2,686	573
Belgium	25,251	39,432	11,429
Bulgaria	2,802	2,157	3,173
Egypt	50,492	62,890	67,931
France	39,452	53,135	36,492
Greece	.....	.....	.....
Holland	.....	16,810	15,540
Italy	16,201	14,021	456
Japan	.....	.....	.....
Norway	2,382	2,673	1,535
Servia	.....	.....	28
Sweden-Denmark	.....	4,738	4,715
Switzerland	.....	.....	.....
Turkey	34,353	27,129	39,658
Spain	.....	.....	.....
Tunis	.....	1,877	48
Totals	241,973	310,200	289,558

	Crude and refined benzine—		
Countries.	1909.	1910.	1911.
United States of America	.....	.....	.....
Algiers	.....	565	.....
Germany	6,841	22,205	23,279
England	10,489	13,136	13,351
Austro-Hungary	2,986	5,621	7,864
Belgium	.....	722	216
Bulgaria	804	691	1,627
Egypt	683	.....	724
France	66,687	66,452	56,086
Greece	17	17	4
Holland	1,783	.....	3,897
Italy	4,682	2,972	644
Japan	.....	.....	.....
Norway	352	1,301	2,142
Servia	49	39	94
Sweden-Denmark	.....	.....	.....
Switzerland	.....	11	.....
Turkey	181	527	744
Spain	.....	.....	1
Tunis	.....	.....	.....
Totals	95,554	114,259	110,673

	Total—		
Countries.	1909.	1910.	1911.
United States of America	.....	2,353	4,007
Algiers	.....	565	.....
Germany	24,573	46,050	53,017
England	70,978	113,999	167,149
Austro-Hungary	5,039	30,826	43,381
Belgium	25,334	40,245	20,595
Bulgaria	5,825	4,476	7,792
Egypt	60,185	66,799	98,043
France	111,062	125,467	106,276
Greece	17	17	728
Holland	9,022	16,840	19,454
Italy	30,795	21,629	17,850
Japan	.....	12,438	1,549
Norway	6,691	7,992	12,090
Servia	291	105	1,009
Sweden-Denmark	.....	4,732	8,441
Switzerland	.....	11	.....
Turkey	36,406	89,895	43,147
Spain	51	.....	639
Tunis	.....	1,878	7,912
Totals	386,269	526,307	613,080

England holds the first place among the countries to which our petroleum products were shipped. The quantity exported to England amounted to 167,149 tons, for the greatest part residuals and refined oil. Next comes France as a consumer of our petroleum products with 106,200 tons, as compared with 125,400 tons for 1910. The falling off concerns chiefly the refined oil and products of the naphtha specification. Egypt holds the third place with 98,000 tons, as compared with 66,800 for the corresponding period of 1910, showing a gain of 31,200 tons, or 46 per cent. In the fourth place is Germany with 53,000 tons, as against 46,000 tons for the same period of the previous year, a gain of 7,000 tons. Other important consuming countries were Turkey with 43,000 tons, Austro-Hungary with 43,000 tons, Belgium with 20,000 tons, Holland with 19,000 tons, Italy with 17,800 tons. It is not without interest to notice that 4,000 tons of Roumanian illuminating oil were shipped to the United States of America. This seems to be a consequence of the great struggle between the Royal Dutch and the Standard Oil Company, which, though less sharp, continues to the disadvantage of the export prices.

In the Roumanian petroleum industry we observe the same tendency as in all growing modern industries to become concentrated in the hands of a few large firms which are absorbing continually the small producers. During the year under review the Astra-Romana Company, created by the Koninglijke Nederlandsche Petrol Matt, has absorbed the Regatul Roman and the Astra companies, forming a large concern with a stock capital of 60,000,000 francs.

Another important transaction for the Roumanian petroleum industry was the agreement between the group, Disconto Gesellschaft Bleichroder and the Deutsche Erdoel A. G., by which the latter acquired all the stock of the Allgemeine Petroleum Industrie A. G. held by the Disconto group against remittance of 3,500,000 marks in shares of the Deutsche Erdoel A. G., 3,000,000 marks in cash and the privilege to subscribe for the new emission of shares of the Deutsche Erdoel A. G. in proportion with their holdings. As a consequence the Deutsche Erdoel A. G. will control the Concordia, Vega and Credit Petrolifie companies formed in Roumania by the Disconto group. The interest taken by the Deutsche Erdoel A. G. in the oil business of this country will undoubtedly have a far reaching influence and contribute to the further developments of the Roumanian petroleum industry.

FRESH CAPITAL INVESTED IN 1911.

The following are the companies formed during 1911, their nominal and paid-up capital, also the financial transformation, etc., during the past twelve months:—In London was registered the E. E. Oil Syndicate, Ltd., capital £20,500 in 20,000 ordinary shares of £1 each and 10,000 deferred B. shares of 1s. each, of which £14,500 have been paid up. This company has transferred its assets to the new company, Moreni (Roumania) Oilfields, Ltd., registered in 1911 with a capital of £50,000.

The Astra-Romana Company, absorbing the Astra and Regatul Roman companies, for which it paid 12,000,000 francs, increased its capital from 28,400,000 to 60,000,000 francs, in 120,000 shares of 500 francs each.

In London was registered the company Roumanian Consolidated Oilfields, Ltd., capital £157,500, in 150,000 preference shares, £1 each, and in 150,000 shares B. of 1s. each. On December 31 the capital paid up was £122,500.

In London was registered the company Roumanian Pipe Line and Trading Company, Ltd., capital £75,000, of which £30,500 has been paid up.

In London was registered the company Bana Moreni Petroleum Company, capital £250,000, in 250,000 shares of £1 each, of which £200,000 has been paid up.

In London was registered the company Moreni Pipe Line and Transport Company, Ltd., capital £105,000, in 100,000 A shares of £1 each, and 100,000 deferred B shares of 1s. each, capital paid up £22,500.

Several other companies have been formed for petroleum exploitations in Roumania, while amalgamation and reorganizations of existing companies are being prepared.

To complete the data regarding the development of the Roumanian petroleum industry during 1911, with such figures as could not be secured at this date, we deem interesting to give, as under the production of each of the leading firms for 1911 as compared with 1910:—

CRUDE OIL PRODUCTION OF THE MOST IMPORTANT COMPANIES DURING 1911, AS COMPARED WITH 1910, IN METRIC TONS.

Company.	1911, metric tons.	1910, metric tons.	Difference.
Steana Romana	399,363	410,251	—10,888
Astra-Romana	520,589	342,748	+177,841
Romana-Americana	137,915	145,276	—7,361
Concordia	80,587	95,646	—15,059
Internationala	70,806	44,867	+25,939
Orion	64,081	61,408	+2,673
Trajan	28,744	27,528	+1,216
Anglo-Roumanian Petroleum Co.	21,525	8,624	+12,901
Colombia	18,211	26,708	—8,497
Naphtha	16,889	16,659	+230
Alfa	16,478	28,301	—11,823
Aquila Franco-Romana	14,133	16,559	—2,426
Roumanian Oilfields, Ltd.	10,837	4,885	+5,952
Moreni Baicoi Co., Ltd.	10,259	382	+9,877
Romana-Belgiana	6,413	7,154	—741
Arnhemsche Petroleum Maat	4,492	5,985	—1,493
Moreni (Romania) Oilfields	4,176	.....	+4,176
Petrolul	3,800	3,720	+80
Italo-Romana	3,327	3,998	—671
British-Roumanian Oil Co.	2,505	823	+1,682
Trati Seceliano	37,623	18,656	+18,967
Totals	1,472,753	1,270,179	+202,575

From this it will be seen that the whole increase of 191,000 tons in 1911 over the production of 1910 is due to these companies, which supplied more than 97 per cent. of the year's total production of 1,513,500 tons. The exports of petroleum products during 1911, as compared with 1910, are given as follows:—

EXPORTS OF PETROLEUM PRODUCTS IN 1911, IN TONS.

Product.	1911. tons.	1910. tons.	Difference.
Crude oil, lubricating oil and residuals	231,327	116,223	+115,104
Refined oil and distillate	323,012	339,282	—16,270
Benzine, crude and refined	125,060	125,751	—691
Paraffine	487	285	+202
Totals	679,886	581,541	+98,345

The total of the exports amounted to 679,886 tons as compared with 581,541 tons for 1910, an increase of 98,345 tons, being nearly 17 per cent. This increase is due entirely to the development of residual exports, which are getting more and more used for foreign navies.

The financial situation of the various companies at the close of 1911, showing their nominal and paid up capital, gross and net profits, or loss, dividends paid, and their crude oil production, is given in the following table:

FINANCIAL SITUATION OF THE MOST IMPORTANT PETROLEUM CONCERNS IN ROUMANIA AT THE END OF 1911, IN FRANCS.

Copany.	Registered in	Nominal capital.	Paid-up capital.
Steana Romana	1896	70,000,000	57,473,595
Astra-Romana	1910	60,000,000	44,167,500
Concordia	1907	25,000,000	25,000,000
Romana-Americana	1904	12,500,000	12,500,000
Roumanian Oilfields, Ltd.	1910	11,250,000	9,339,050
Orion	1910	11,000,000	11,000,000
Aurora	1898	8,717,420	8,717,420
Internationala	1899	7,916,666	6,197,916
Italo-Romana	1905	7,500,000	7,500,000
Moreni-Ghirdoveni	1908	7,500,000	7,500,000
Colombia	1905	6,700,000	6,177,000
Moreni (Roumania) Oilfields, Ltd.	1911	6,437,500	3,035,000
Bacau Maatschappij	1911	6,300,000	4,200,000
Bana Moreni Petroleum Co.	1911	6,250,000	5,000,000
Aquilla Franco-Romana	1904	6,000,000	6,000,000
Credit Petrolifer	1905	6,000,000	5,000,000
Naphtha	1906	6,000,000	3,000,000
Trajan	1905	5,000,000	5,000,000
Vega	1905	5,000,000	3,750,000
British Roumanian Oil Co., Ltd.	1910	5,000,000	3,737,300
Totals		280,071,586	234,295,181

Company.	Gross profits for the last business year.	Net profits for the last business year.
Steana Romana	12,184,314	3,733,228
Astra-Romana	11,172,493	3,322,601
Concordia	*2,619,304	*1,804,083
Romana-Americana	*2,267,237	*722,289
Roumanian Oilfields, Ltd.	155,901	.....
Orion	2,069,645	645,513
Aurora	100,295	.....
Internationala	1,197,044	281,170
Italo-Romana	217,221	*5,855,259
Moreni Ghirdoveni	.....	*80,186
Colombia	538,469	6,000
Moreni (Roumania) Oilfields, Ltd.	.....	.....
Bacau Maatschappij	.....	.....
Bana Moreni Petroleum Co.	.....	.....
Aquila Franco-Romana	1,152,500	339,800
Credit Petrolifer	1,234,867	409,540
Naphtha	325,165	131,021
Trajan	209,338	*123,364
Viga	813,898	306,803
British Roumanian Oil Co., Ltd	.....	*141,851

* Losses.

Company.	Dividend paid in 1910. per cent.	Crude oil production in 1911.
Steana Romana	8	390,363
Astra-Romana	10	520,589
Concordia	..	80,587
Romana-Americana	..	137,915
Roumanian Oilfields, Ltd.	..	10,837
Orion	8	64,081
Aurora	..	.....
Internationala	4	70,806
Italo-Romana	..	3,327
Moreni-Ghirdoveni	..	.....
Colombia	..	18,211
Moreni (Roumania) Oilfields, Ltd.	..	4,176
Bacau Maatschappij	..	.....
Bana Moreni Petroleum Co.	..	.....
Aquila Franco-Romana	5	14,133
Credit Petrolifer	7	.....
Naphtha	5½	16,889
Trajan	..	28,744
Vega	7	.....
British Roumanian Oil Co., Ltd.	..	.....
Totals	..	1,369,658

We wish to add that the petroleum companies taken together have a nominal capital of three hundred and thirty-seven million francs, of which the paid up capital on December 31, 1911, amounted to two hundred and twenty-seven million francs. The assets of the joint stock companies at the same date can be valued three hundred and forty million francs.

GALICIAN PETROLEUM INDUSTRY.

The year 1911 may be designated as one of the most unfavorable in the history of the Galician petroleum industry. The crude oil production of Borys-law-Tustanowice, which during the previous years had taken a natural development and had attracted the attention of foreign capitalists, has, during the past twelve months, witnessed a considerable and steady decrease. From 1,621,000 tons for the preceding year the output for 1911 hardly attained 1,303,000 tons, showing a decrease of 317,700 tons, being more than 19 per cent. Those who follow closely the development of the Galician petroleum industry know the reason of this decline of production, and remember the catastrophe of inundation which most unexpectedly destroyed a large number of the most prolific Boryslaw and Tustanowice wells. Commissions of specialists and scientists were appointed to investigate this unwelcome occurrence, but the combined efforts of all these, together with operators and representatives of the government, remained powerless, and up to the present were unable to bring any help, nor could they ascertain the real cause of the origin of the water infiltration in the producing wells.

The fact is that the production, especially that of Tustanowice, was in steady and rapid decline, and nobody, at the present moment, can tell when this situation will change to the better.

The following table gives the crude oil production at Boryslaw and Tustonowice month by month in 1911, as compared with 1910.

GALICIAN CRUDE OIL PRODUCTION FOR 1911 BY MONTHS AND TONS, AS COMPARED WITH 1910.

1911.

Months.	Boryslaw.	Tustanowice.	Total.
January	17,030	131,390	148,420
February	13,900	111,660	125,560
March	16,900	110,790	127,690
April	16,440	96,830	113,270
May	16,750	88,530	105,280
June	16,480	84,130	100,610
July	18,100	87,840	105,940
August	19,630	81,890	101,520
September	16,540	80,620	97,160
October	14,890	82,350	97,240
November	15,600	78,550	94,150
December	15,660	70,750	86,410
	197,920	1,105,330	1,303,250

1910.

Months.	Boryslaw.	Tustanowice.	Total.
January	16,370	133,328	149,698
February	14,275	122,485	136,760
March	18,320	124,120	142,440
April	16,270	116,270	132,540
May	18,290	110,540	128,830
June	19,935	111,425	131,020
July	20,310	109,580	129,890
August	19,310	114,530	133,840
September	16,935	107,600	124,535
October	16,835	113,435	130,270
November	15,645	118,255	133,900
December	15,645	131,715	147,360
	207,800	1,413,283	1,621,083

TOTAL PRODUCTION IN TONS.

	1911.	1910.	Difference.
Tustanowice	1,105,330	1,413,283	307,953
Boryslaw	197,920	207,800	9,880
Totals	1,303,250	1,621,083	317,833

From this table it will be seen that while the decrease of the Boryslaw production hardly exceeded 4 per cent., that of Tustanowice reached more than 21 per cent.

The figures for the other producing oil fields in Galicia, such as Schednica, Uryer, Rogi, Krosno, etc., have not yet been published, but their aggregate yield is comparatively slight, and cannot influence the general position of the Galician petroleum industry. The following table shows the quantities of crude oil delivered by rail from Boryslaw in 1911.

DELIVERIES OF CRUDE OIL BY RAIL FROM BORYSLAW IN 1911.

(In metric tons.)

Months.	Tank cars.	Tons.
January	5,903	82,140
February	5,096	71,939
March	6,799	91,586
April	6,529	90,854
May	5,780	82,650
June	5,783	82,576
July	6,051	83,348
August	5,666	78,482
September	5,092	69,123
October	6,694	91,080
November	7,405	103,425
December	7,503	104,921
	74,301	1,032,115

The Austrian refining industry was, during the past twelve months, laboring under the difficulty of establishing an agreement between the various refineries for the sake of their products. Meeting after meeting was held, and the negotiations carried on for a long time could not be brought to a close. In the meantime the trade suffered from a keen competition, and a good many important refineries asked to join the combine, put such conditions as could not be accepted by the commission. After long discussions and negotiations with the various outside standing and reluctant refineries, they finally succeeded toward the end of the year to overcome the difficulties and form a combine to which almost all the big refineries gave their adhesion. The Vacuum Oil Company (American interests) on the Limanowa refinery (French interests) have up to the present not joined the combine.

As a consequence of this improving situation of the refining industry, and as a result of the decrease of the crude oil production, the prices on the home market had a firm and upward tendency. The following figures show the movement of prices for Galician crude oil during 1911 in kronen per 100 kilos at Boryslaw.

CRUDE OIL PRICES FOR PROMPT DELIVERY BY MONTHS IN KRONEN.

(Per 100 kilos.)

	1911. Low.	1911. High.	1910. Low.	1910. High.
January	2.89	2.90	2.20	2.24
February	2.79	2.80	2.70	2.80
March	3.22	3.23	2.80	2.84
April	3.22	3.24	2.93	2.95
May	3.37	3.38	3.03	3.05
June	3.52	3.53	3.34	3.42
July	3.50	3.51	3.30	3.40
August	3.49	3.50	3.18	3.14
September	3.46	3.47	3.05	3.07
October	3.70	3.71	3.16	3.14
November	4.01	4.02	3.12	3.14
December	4.00	4.01	2.92	2.93

From the above it will be seen that the prices which in January were $2.89 @2.90 kronen for prompt delivery, rose continually, attaining and even exceeding 4 kronen in November and December.

By the agreement finally arrived at between the Austrian refineries, which will put an end to the keen competition and by a better organization given to the marketing of their products, it may be expected that a new era will be opened, and that better times are in store for the Galician petroleum industry.

Mexican Petroleum Fields.

Mexico during the year 1911 emerged from the nebulous state of oil production to an established and recognized factor in that industry. Wonderful progress was made in developing the different districts in what is known as the Tampico or Gulf coast territory during the year. While the discovery of oil in some of these localities dates back three or four years, there were many difficulties to be overcome before the industry could be placed on a substantial basis. In this work of development American capital and American mental and physical efforts have taken the leading part. With the exception of the English holdings practically all of the oil land leases and ownerships are American. The great difficulty that has been met with and which is now being rapidly overcome is to provide transportation lines and storage facilities for the product.

It is estimated that there are at this time approximately 14,000,000 barrels of oil in storage in the different districts and at Tampico, which is the terminal of some of the pipe lines. Of this amount the Pearson interests, which operate in Mexico under the names of S. Pearson & Son, Ltd., Oil Department, with general offices in Mexico City, and the Compania Mexicana de Petroleo El Aguilla, S. A., also of Mexico City, have approximately 7,000,000 barrels in steel storage tanks and earthen reservoirs, and the Huasteca Petroleum Company about 6,000,000 barrels in its storage tanks. The lack of transportation facilities has prevented many of the wells from being opened to anything like their full capacity. It is estimated that if this was done the daily production would be about as follows:—

Pearson interests—One well in the Potrero del Llano field, 100,000 barrels; ten wells in the Tanghuijo field, 2,000 barrels; ten wells in the Furbero field, 2,000 barrels.

Huasteca Petroleum Company, which has its principal office in Los Angeles, Cal.—Three wells in the Juan Casiano field, 100,000 barrels.

Mexican Petroleum Company, which belongs to the same interests as the Huasteca Petroleum Company—Fifteen wells in the Ebano district, 6,000 barrels.

The Waters-Pierce Oil Company—Wells in the Topila field, 500 barrels.

East Coast Oil Company—Wells in the Topila field, 8,500 barrels; wells in the Panuco field, 1,000 barrels.

Other concerns, 10,000 barrels.

This makes a total of approximately 230,000 barrels daily that is now available. It is claimed by the producers that with the proved area that already exists it would not be difficult to increase the daily production to 1,000,000 barrels.

While the market in Mexico at this time for crude oil is limited, there is an enormous field for its sale in the United States and other foreign countries. What is now lacking to place the Mexican producers in touch with this foreign demand is additional pipe lines to Tampico and other ports and fleets of oil-carrying vessels.

Considerable shipments are already being made to Texas ports by the Texas Company, which has its general offices in Houston, and during the past twelve months entered the Mexican field and is now a very active factor in the oil trade of this country. It may be mentioned in this connection that the Texas Company has a contract with the East Coast Oil Company, the latter being a Southern Pacific concern, for a large share of its oil production. The Texas Company will soon lay a pipe line from the Panuco and Topila districts to Tampico. It has erected two 55,000 barrel storage tanks at Tampico and this storage capacity will later be greatly enlarged.

The phenomenon of the year was the gusher which was brought in at Potrero del Llano by the Pearsons. This well ran wild for 108 days, and during that period it is said to have produced approximately 135,000 barrels of oil per day through an eight-inch casing. There were lost more than 10,000,000 barrels of oil which gushed uncontrolled from this well. It flowed into a small tributary of the Tuxpan River and made its way along that stream into the gulf. The capping of this monster was a task that required the exercise of great ingenuity, but it was finally accomplished under the personal direction of Lord Cowdray, head of the Pearson syndicate, who was on the ground. The oil from this well tests 20 Beaume. After having been brought under control the well was throttled to flow about 15,000 barrels per day and this production was turned into a large earthen reservoir which was erected as an emergency storage. It has been full to its capacity for some time, containing about 3,500,000 barrels. The Pearsons laid an eight-inch pipe line from the well to Tuxpan, where they have terminals and loading facilities for their sea-going vessels. The Pearsons are erecting 15 steel storage tanks, each of 55,000-barrel capacity. They have been making regular deliveries of about 6,000 barrels a day for transportation to their refineries at Minatitlan on the Isthmus of Tehuantepec. The Pearson interests own about 1,500 acres of land, situated near the junction of the Panuco River and the Tampico-Tuxpan Intercoastal Canal, near the city of Tampico. This land is being converted into an oil tank farm. They are erecting 17 storage tanks, each of 55,000-barrel capacity, and have just finished three 42,000 barrel tanks on the farm. Besides these tanks the Pearsons have completed and are utilizing thirty 55,000-barrel tanks in the Potrero del Llano district and at Tuxpan. The Pearson interests have also purchased a site for a refinery, which, it is said, they will erect adjacent to Tampico. The Pearsons finished the early part of the year a six-inch pipe line and a railroad from Furbero, State of Vera Cruz, to Tuxpan for the purpose of handling the output of the oil fields of Mexico, ltd. The wells in the Furbero district, however, have not proved the producers that was anticipated. Their deliveries to the Pearsons have been about 1,200 barrels a day. The Pearsons during the year did very little development work on their oil lands in the more southern portions of the country in the States of Tabasco and Chiapas. This syndicate is operating also in the vicinity of Cerro Azule and upon a large tract of land situated between the town of Tamiahua and the Tuxpan River in the State of Vera Cruz. Upon the latter tract they have two producing wells with an aggregate capacity of about 4,000 barrels. It is announced that the Pearsons have closed a contract with the British government for supplying it with 20,000 barrels of crude oil per day.

The largest active producers of oil in Mexico are E. L. Doheny, of Los Angeles, Cal., and associates who operate in this country under the names of the Huasteca Petroleum Company and the Mexican Petroleum Company. The tract of land which the Huasteca Petroleum Company is developing is situated in the Juan Casiano district, about 80 miles southwest of Tampico. The production of this company during the last twelve months has averaged about 30,000 barrels per day, and this was obtained from a few wells, the others being capped. During the year it brought in several wells that gave a flow of 3,000 to 25,000 barrels per day. It has constructed an eight-inch pipe line between Juan Casiano and its tank farm at Tampico, this line being equipped with six pumping stations. It is now laying a second pipe line and constructing a railroad to connect the field with this port, and has in contemplation the construction of a third pipe line. From its largest well the company lost a large amount of oil, estimated at more than 1,000,000 barrels, through lack of storage facilities. It is now finishing fifteen tanks, each of 55,000-barrel capacity per month, and also built during the year one 850,000-barrel reservoir at Juan Casiano, and has all of these full of oil. Besides a daily delivery of 10,000 barrels of oil to the National Railways of Mexico the company has a contract with the Waters-Pierce Oil Company to furnish it with 10,000,000 barrels of oil at the rate of 5,000 barrels per day. This oil is used by the Waters-Pierce Oil Company in its refinery at Tampico. It is also delivering large quantities of oil to other concerns.

The Huasteca Petroleum Company has, it is reported, adopted plans for the erection of a large refinery at this place. It also holds a concession from the Federal Government for the construction of a pipe line from Juan Casiano to the City of Mexico, and this work will be carried out during the present year. It expects to soon be in position to deliver about 55,000 barrels daily to its Tampico terminals. It will also soon be able to more than double its oil storage, which at present exceeds 4,000,000 barrels, upon its tank farm here. The acreage of oil land owned by this company is about 500,000 acres, comparatively little of which has so far been developed.

The Mexican Petroleum Company, which also belongs to the Doheny interests, has done comparatively little development work upon its tract at Ebano during the year. Its daily production averages about 12,000 barrels. It erected a 1,000,000-barrel reservoir, which is now full.

The East Coast Oil Company recently erected two steel storage tanks, each of 35,000-barrel capacity, upon its property in the Topila district, and constructed an eight-inch pipe line to the Panuco River about two miles distant where loading racks for the river barges were established. The storage tanks were filled from two wells at the rate of 4,000 barrels per day. This company also has a flowing well in the Panuco district, its output being, however, only 200 barrels per day.

Leonard & Company have two wells in the Topida district which have a total output of about 500 barrels per day. This is being also placed in storage.

The companies which have been mentioned in the foregoing review are the only oil producers in Mexico. There are many other concerns, numbering probably more than forty, which are employed more or less extensively in exploiting lands in different sections with a view of developing oil. Some of these concerns have in a measure been sucessful, but owing to difficulties that they encountered have not been able to put their propositions on a commercial basis as yet. The producing area is being gradually broadened, and it is the opinion of oil experts that is is only a question of time when a great scope of territory extending perhaps from near the lower Rio Grande all the way down the coast to the Isthmus of Tehuantepec will be proven to be underlaid with a wealth of oil. While the exporations at this

time are being conducted for the most part in the section that borders the Gulf coast between Tampico and Tuxpan, a distance of about 120 miles, there is a showing of development activity in the region north of Tampico and below Tuxpan. One of the notable features of the industry during the year was the advent into different oil districts of a number of the larger American oil producing and refining concerns and financial interests.

CANADIAN PETROLEUM FIELDS.

The Devonian and Silurian strata of Southwestern Ontario, the chief petroleum district of Canada, have for years yielded good supplies of petroleum, natural gas, salt and gypsum. Petroleum may be declining in production, but that there are reserviors, great or small, yet untouched seems to be shown by the striking of oil in paying quantities a short time ago in Onondaga township and the field for profitable production of natural gas appears to be steadily widening until it promises to cover a large part, if not the whole of the northern and eastern shores of Lake Erie. These stratified rocks have their counted parts on the slope leading down to James Bay. Already gypsum in large quantities has been located there and it would seem not unreasonable to entertain the hope that the future inhabitants of the clay belt, north of the height of Canada, may find it possible to light their homes with oil, cook their food with natural gas, and cure their pork with salt, all derived from the rocks underlying the farms from which they harvest their crops.

Lambton county, Ontario, has been for long years the chief petroleum district of Canada. The wells there were opened forty-five years ago, and six years ago Tilbury East and Romney townships proved to contain oil. But the yield in both fields is steadily declining and in the newer field the rate of diminution has been greater than in the older one. Twenty years ago the production of crude in Ontario was 35,000,000 gallons, while in 1911 it did not very far succeed 10,000,000 gallons. Much of the greater part of the crude required by the refineries in Ontario is imported from the United States. The oil-bearing formations in Southwestern Ontario have great thickness and are of wide extension, and it is quite possible that new pools will be discovered. The history of the field warrants such expectations.

The counties on the north shore of Lake Erie constitute the natural gas fields of Ontario, though during the last two years the fields near Moncton have given promise of important yields. The natural gas product in 1911 was valued at over $2,000,000, or half a million increase over 1910.

With reference to the production of crude petroleum, the following figures show amount produced annually in Canada upon which bounty has been paid for the last seven years:

	Gallons.
To June 30, 1905	23,336,478
To June 30, 1906	19,410,480
To March 31, 1907	17,770,205
To March 31, 1908	26,081,139
To March 31, 1909	17,379,871
To March 31, 1910	13,572,587
To March 31, 1911	10,706,418

ESTIMATED CANADIAN CRUDE OIL PRODUCTION, 1911.

[Divided into districts.]

	Dutton		Richardson Chatham, including Blakely).	
	Bbls.	Gals.	Bbls.	Gals.
January	428	19	282	31
February	285	19	152	11
March	286	30	...	..
April	283	25	287	8
May	430	24	144	19
June	286	31	...	..
July	287	..	335	30
August	143	22	149	26
September	286	6	125	19
October	294	32	...	..
November	304	7	142	25
December	279	30	154	33
Totals	3,598	..	1,775	27

	Oil Springs		Bothwell	
	Bbls.	Gals.	Bbls.	Gals.
January	4,267	17	3,005	12
February	2,625	32	2,838	24
March	4,365	17	2,949	7
April	4,528	8	2,815	14
May	4,275	23	2,870	4
June	5,912	4	2,888	10
July	5,763	27	2,984	24
August	5,443	14	3,274	28
September	5,488	30	2,885	20
October	4,764	6	2,416	22
November	5,730	5	3,362	27
December	3,083	2	2,802	8
Totals	56,248	10	35,093	34

	East Tilbury and Raleigh.		Onondaga	
	Bbls.	Gals.	Bbls.	Gals.
January	3,652	26	300	..
February	3,167	17	427	28
March	4,107	13	291	23
April	3,981	25	592	21
May	4,350	22	2,386	5
June	4,450	5	1,858	24
July	3,240	3	1,158	9
August	3,437	3	1,568	9
September	3,119	14	2,029	5
October	5,873	19	737	29
November	4,515	12	541	10
December	5,151	23	710	..
Totals	49,027	7	12,601	23

	Petrolia (including districts not enumerated).	
	Bbls.	Gals.
January	11,159	22
February	10,578	1
March	10,459	16
April	10,527	6
May	12,417	17
June	11,317	21
July	10,114	23
August	10,966	7
September	9,511	30
October	10,538	18
November	8,771	26
December	9,726	15
Totals	126,088	27

Total year's production, all districts, 284,433 barrels and 23 gallons.

NECROLOGICAL RECORD OF 1911.

During the year which ended December 31, 1911, sixty-eight men died who had been more or less prominently identified with the trades represented by the Oil, Paint and Drug Reporter. A short record of the life and business career of each of them appeared in the Reporter when the time came. Following are the names, ages and dates of death, and the dates of the issues of the Reporter in which the respective obituary notices appeared:—

Date of Issue.	Name and date of death.	Age.
Jan.		
9.	William T. Wardell, Jan. 3, 1911	84
9.	William H. Jordan, Dec. 29, 1910	68
9.	Charles W. Pettet, Jan. 3, 1911	73
16.	Horace F. Whitman, Jan. 9, 1911	64
16.	Frederick J. Greene, Dec. 31, 1911	53
16.	Henry Wells, Jan. 7, 1911	62
23.	Lee M. Evans, Jan. 13, 1911	..
23.	Samuel Woolner, Jan. 14, 1911	64
30.	George Arthur Plimpton, Jan. 13, 1911	74
Feb.		
13.	Granville G. Allen, Jan. 29, 1911	46
27.	Charles F. Grosholz, Feb. 22, 1911	72
27.	George Hires, Feb. 16, 1911	72
March		
6.	George Lowe, Feb. 25, 1911	77
6.	G. G. Minor, Feb. 27, 1911	63
6.	J. H. vant Hoff, March 3, 1911	59
6.	Everett Elting, Jr., Feb. 26, 1911	42
13.	James M. Whitecar, March 6, 1911	66
20.	W. W. Russell, March 8, 1911	45
27.	L. C. Gillespie, March 21, 1911	66
27.	John Altfield, March 20, 1911	76
27.	John Fertig, March 19, 1911	74
April		
3.	Dr. Thomas I. Webb, March 24, 1911	3
10.	Bernard G. Amend, April 7, 1911	90
10.	Alfred Burdsal, April 2, 1911	82
10.	A. A. Lincoln, April 1, 1911	69
17.	Alexander Richard Lewis, April 9, 1911	60
17.	William A. Elmendorf, April 8, 1911	92
24.	Theodore W. Fairies, April 17, 1911	63
May		
1.	Gustav A. Schwarz, April 24, 1911	54
1.	Edward H. Wardwell, April 29, 1911	70
1.	Arthur Edmunds Jenks, April 24, 1911	47
1.	Edward G. Wells, April 27, 1911	65
15.	Philip Ruprecht, May 8, 1911	58
22.	Miles B. Preston, May 10, 1911	66
22.	James Smith, May 16, 1911	53
22.	Frank W. Edward, May 13, 1911	61
June		
5.	Wallace Procter, May 27, 1911	61
July		
10.	Orlando H. Jadwin, June 28, 1911	78
10.	Erister Ashcroft, June 17, 1911	37
10.	Constantin Alimonestianu	..
Aug.		
7.	Daniel D. Philips, Aug. 1, 1911	69
14.	William R. Shaw, Aug. 8, 1911	37
28.	Delevan Emery, Aug. 15, 1911	44
28.	Joseph Tetlow, Aug. 20, 1911	48
Sept.		
4.	John Kellogg, Aug. 31, 1911	85
4.	Peder Devold, Aug. 11, 1911	73
11.	Henry Hotopp, Sept. 4, 1911	74
11.	Charles Frederick Wise, Sept. 5, 1911	67
18.	William S. Cutler, Sept. 10, 1911	66
25.	Francis Jordan, Jr, Sept. 10, 1911	68
25.	John Eaton, Sept. 16, 1911	71
Oct.		
2.	John Hornick, Sept. 19, 1911	68
2.	John H. Prince, Sept. 21, 1911	81
2.	Sir Samuel Alexander Sadler, Sept. 30, 1911	69
23.	James F. Gill, Oct. 15, 1911	52
23.	Henry Addison Tilton, Oct. 1, 1911	..
Nov.		
6.	John W. Perkins, Nov. 1, 1911	91
13.	James Farwell Cowee, Oct. 31, 1911	67
20.	Dr. Charles E. Thomas, Nov. 13, 1911	73
20.	Henry F. James, Nov. 7, 1911	70
Dec.		
4.	Hubert Spencer Merrill, Nov. 29, 1911	54
11.	Thomas M. Curtius, Dec. 5, 1911	48
11.	Charles E. Dohme, Dec. 7, 1911	68
11.	Augustus P. Thompson, Nov. 24, 1911	87
11.	Eugen de Hoen, Nov. 16, 1911	76
18.	Galvin Hotchkiss, Dec. 8, 1911	24
25.	George Holland, Dec. 12, 1911	51
25.	Thomas Brown, Dec. 17, 1911	60

WESTERN PEPPERMINT SITUATION.

About one year ago it began to be very apparent to dealers in peppermint oil that the stocks which had accumulated during several seasons of low prices were being exhausted, consequently there was considerable increase in values during January, February and March, and the holdover stocks were reduced to about 25,000 pounds, so that the consumption of oil for 1911 used up all that was grown in addition to about 75,000 pounds held-over stocks.

This situation was known to both growers and dealers. Growers put forth every effort to supply the deficiency, but some dealers who understood conditions knew that a one-third increase was not possible, consequently a large proportion of the 1911 crop was bought by these speculators before it was planted and at prices which usually might have seemed high. This caused peppermint not only to maintain the high level it had reached earlier in the year, but it went still higher.

As I have said before, the growers had planted a larger acreage than in 1910, and it really looked for awhile as if they might produce nearly a normal crop, but the weather became very hot and dry in May, then the troublesome worms appeared and between the two the acreage was reduced very much.

Along in June the weather became more favorable and what peppermint was left in most localities got a fair growth. The result was we finally produced about 20,000 pounds more peppermint in 1911 than in 1910.

It was the impression of some dealers that the 1911 crop might be even 30,000 pounds more than in 1910, so with conditions still more in their favor. August saw peppermint at about $3 per lb. At this figure the market was supplied quite freely until finally there came a slight break of a few cents, which, as usual, came shortly before the holidays. Growers are getting wise to the fact though, that dealers and consumers are slow to buy before taking inventory.

Speculators in the West have used this dull period to try and again replenish their depleted stocks, but with rather poor results on account of the extremely high views of present holders.

Many efforts were made by bears to break the market of 1911 by offering oil to one another and by selling inferior quality at a reduced figure, but with the large proportion of the crop in strong hands and the positive knowledge that the crop was insufficient to supply a normal demand, their position was impregnable, so that nearly every one now, including both holder and consumer, look for another advance in the early part of 1912.

There was much talk of the possibility of the increase in values curtailing consumption, but after much careful inquiry I find the demand has increased in the United States surprisingly.

The reason for this is because growers are taking better care to keep their fields free from weeds and better distilleries are also being used, because the dealers now who pay the best prices are refusing to buy poor oil, and this makes it impossible for growers to realize what they would like on this quality. Consequently it is not desirable.

A few years ago there was no difference made in prices worth mentioning, and everything went, but since the consuming trade has learned that not all oil is peppermint oil, they are willing to pay more for the kind that improves the quality and sales of their products.

This is working for the good of growers of pure peppermint and consumers. It also places Michigan and Indiana in their proper places, as the producers of the very best as well as practically all the peppermint in the United States. Wayne county, New York, is out of the race and has been for some time, not being able to compete with Michigan and Indiana on account of soil and climatic conditions.

It is estimated there were 245,000 pounds produced in 1911, against 225,-161 pounds in 1910. There are nearly 300,000 pounds consumed yearly now.

There are about 35,000 pounds still in growers' hands and same is very firmly held, except a few undesirable lots.

I would say here, that if growers continue to improve the quality of their peppermint and manufacturers insist on pure oil, I see no reason why this flavor should not become much more popular than ever.

TRADE CONDITIONS AS VIEWED BY REPRESENTATIVE MEN.

The accompanying letters from representative business men in different parts of the country speak for themselves. They should be read with interest, as the past year has been one in which there has been much confusion in business conditions.

The Solvoy Process Company, Syracuse, N. Y. F. R. Hazard, President.

The year which has just closed showed a fairly satisfactory volume of business, and we have every reason to anticipate that the present year will show a normal increase in volume.

As the articles which we manufacture and sell enter into many different lines of industry, we believe that the general business of the country will be fairly satisfactory, since the requirements for our products show that consumption in general is on the increase.

Isaac Winkler & Bro., Cincinnati, Ohio.

The year 1911 has been all right so far as volume has been concerned, but as has generally been the case profits have been small.

The outlook for 1912 is not particularly promising. With the desire on the part of everyone to maintain his past volume of business, competition will naturally be sharper, with the result of a further curtailment in profits.

National Aniline & Chemical Company, New York, N. Y., I. F. Stone, President.

We believe the drug and chemical business as a whole for 1911 was very satisfactory, as the volume of sales was large and good prices as a rule obtained. For 1912, however, we are afraid the outlook is not so satisfactory, as recent tariff and political developments are such that it looks to us as if there would be more or less uncertainty for some time to come, and business will therefore be restricted in the meantime. However, the natural demands of the country in our lines are such that we are always inclined to be optimistic and while the year may turn out not as satisfactory as the past two or three years we believe that a fairly normal business will be done.

The Fred. G. Clark Company, Cleveland, Ohio, William E. Wall.

As far as the oil trade is concerned, speaking purely from our point of view, I beg to state that the outlook for the ensuing year is very much brighter than the outlook this time last year. The Western situation in the meantime, has undergone many changes and the refiners have the matter in very much better shape. They are getting fair prices for their products, there has been enormous demands for oils within the last four months and the prices have advanced very materially.

There are, however, so many different angles to be taken into consideration with respect to the oil business that changes come about at times very quickly, and while everything looks bright at the present time, six months hence might tell a different story. This time last year it would hardly be possible for anyone to conceive that conditions would be as they are today. It may change again before the year is out, but we hardly think it possible.

There has been enormous demand for oils for export, and it is a great question whether or not the refiners in this country will be able to turn out enough lubricating oil, at least within the next year, to supply the demand.

Parke, Davis & Co., Detroit, Mich., Frank G. Ryan, President.

Our sales in 1911 were larger by a considerable sum than in any other year in our history, and we expect a good and healthily growing business from 1912. We are convinced that, barring extended crop failures, the drug business will prosper during 1912—prosper and grow. But there is no denying that the outlook would be even better than it is if the dark cloud of tariff revision were not hanging over our heads and if the Presidential campaign were over. On the other hand, very reassuring factors are to be found in the prosperity of our farmers, in the active demand for steel and in the large excess of exports over imports.

The Presidential campaign once out of the way we look for a long term of high-tide prosperity. Why not? One must have a very bad case of chill in the feet to doubt the continued progress of our country in every material and intellectual field.

Schieffelin & Co., New York, N. Y., William Jay Schieffelin, President.

The first half of last year showed a satisfactory increase of business, but a decline set in and there was a considerable shrinkage during the second half.

While prices have remained fairly steady the smaller orders led some of the jobbers in various parts of the country to make concessions, as they thought they were losing trade to competition, but the fact that everyone had been affected by the falling off in business evidently led them to avoid a campaign of price cutting, because there is only one district which now appears to be suffering from this evil.

The year 1912 began quietly, but orders appear to be increasing and will probably continue to improve, although the proposed revision of the chemical schedule of the tariff will upset business in the articles affected. The reasons for some of the proposed changes are by no means apparent, and matters would be expedited if a tariff bill when introduced should be accompanied by a memorandum giving the facts which led the committee to suggest the amendments. If these tariff questions could be settled promptly one way or the other, far less disturbance of business would result than is caused by the uncertainty.

Peter-Neat-Richardson Company, Louisville, Ky., M. C. Peter.

There was nothing phenomenal in the year's business, it was a fair average year. The net results were not unusual and the gross results would have been entirely satisfactory but for the continued tendency to greater cost in doing business, consequently reducing the net returns for the labor expended. This presents one hope that the future may bring some method to correct these evils, namely, that a method may be adopted which would reduce the cost and leave a better proportion of the gross earnings as a remuneration for our efforts.

While one can see, from the standpoint occupied by the writer, that this should be a good year, even in the face of the Presidential election, it would seem that if we could devote our attention to the problems presented by our own business instead of trying to account for unsatisfactory conditions which we think are produced by outside circumstances, business ought to be put upon a satisfactory basis.

The Pure Food and Drugs law has undoubtedly been of great benefit and will continue to be so if its provisions are faithfully observed.

The facts remain that corrections of the evils must be made through the efforts of the wholesale druggists themselves. If this can be done we

ought to do well financially. As we have a business that is not easy to learn, full of details, without any vacation season, and without any particular period of unusual activity and ought to be made more profitable if we have sense enough to correct an unreasonable expense in doing it.

National Lead Company, New York, N. Y., William W. Lawrence, President.

We are always reluctant to make predictions in regard to the future, but at this moment I am happy to say that the new year has opened with decidedly increased tonnage in various departments, and notwithstanding the conditions prevailing considered detrimental to business expansion we confidently hope for a better year's business than that of the year just ended.

Pittsburgh Plate Glass Company, Pittsburgh, Pa., W. L. Clause, President.

The results for the past year were disappointing, in that a large volume of business was done at too small a profit, because the volume, while large, was enough short of productive capacity of the country to produce a sagging market, which ultimately reached the lowest level in the history of the industry. What was true of the past year promises to be true during the current year, and, I think, in a large measure represents business conditions. It makes a great difference whether there is just a little shortage of a commodity or whether there is a small surplus. Either condition tends to produce a much greater movement in prices than would seem to be consistent with the quantity of shortage or surplus involved. I know of nothing that can relieve this situation until political and business confidence is so restored as to encourage the normal development and growth of the resources and interests of the country.

The Lowe Brothers Company, Dayton, Ohio, John G. Lowe, Secretary.

The cessation of wide fluctuations in the price of linseed oil during the past few months has steadied business to a great extent and avoided the motive of speculation. We are hearing daily from many of our dealers that they are expecting a good volume of sales when spring commences, and the manner in which our business is opening up is pleasing. We are anticipating a good year.

Westmoreland Chemical and Color Company, Philadelphia, Pa., Henry C. Stewart, President.

We were exceedingly well satisfied with the demand for our products during 1911 and are anticipating doing an increasing business during the current year.

We are now satisfied that we are doomed to disappointment, and that trade in the dry paint business in 1912 will be much curtailed in volume because of the high price of linseed oil and the pending political campaign.

The Hall-Van Gorder Company, Cleveland, Ohio., Lucien B. Hall.

The volume of our business for the last year was a trifle more than for the one preceeding it, and while it was not what we expected, suppose we should be satisfied.

We do not have great expectations for nineteen hundred and twelve, it being Presidential year we fear there will be more politics than business.

BRITISH TRADE WITH FOREIGN COUNTRIES AND COLONIES.

COMPRISING ARTICLES OF INTEREST TO READERS OF THE REPORTER.

Imports.

	Quantity, year ended Dec. 31.			Value, year ended Dec. 31.		
	1909.	1910.	1911.	1909. £	1910. £	1911. £
Oils, refined:—						
Cocoanut, cwts.	177,085	500,219	588,850	315,690	1,136,736	1,259,083
Cottonseed, tons	17,560	15,950	21,909	482,139	562,672	713,925
Olive, tuns	4,186	6,311	4,336	276,743	386,189	296,824
Palm, cwts.	58,645	60,775	111,545	85,968	111,800	223,677
Totals	.....	.....	.....	1,160,540	2,197,397	2,493,509
Spices:—						
Cinnamon, lbs.	1,590,176	1,051,087	1,344,396	25,891	20,856	21,790
Ginger, cwts.	40,923	42,939	69,989	90,702	100,771	156,656
Pepper, lbs.	20,454,898	19,289,870	17,940,411	370,912	414,765	427,978
Unenumerated, lbs.	11,575,453	7,214,194	8,101,187	227,483	145,769	171,999
Totals	.....	.....	.....	714,988	682,161	778,423
Saccharin and mixtures containing saccharin or other substances of like nature or use:—						
Imports, ozs.	1,079,588	1,369,168	1,391,106	15,391	14,313	14,521
Entered for home consumption, ozs.	584,872	647,770	994,634	.....	.....	.....
Oil seeds:—						
Castor, cwts.	.....	.....	1,299,147	.....	.....	775,532
Cotton—						
From Egypt, tons	331,608	190,609	298,359	2,533,037	1,662,485	2,468,807
From British India, tons	177,088	415,192	197,773	1,063,499	2,630,112	1,272,920
From other countries, tons	91,681	84,370	100,827	555,551	573,266	656,948
Totals, tons	600,377	690,171	596,959	4,152,087	4,865,863	4,398,675
Flax or linseed—						
From Russia, qrs.	179,377	229,504	183,199	425,138	713,246	608,361
From United States, qrs.	35,293	22,643	1,217	86,558	59,528	4,363
From Argentine Republic, qrs.	873,617	398,062	331,464	1,829,989	1,139,651	1,114,917
From British East Indies, qrs.	540,161	774,665	833,107	1,250,918	2,409,281	2,847,649
From other countries, qrs.	68,980	53,385	44,887	169,588	174,012	153,246
Totals, qrs.	1,697,428	1,478,259	1,393,874	3,762,191	4,495,718	4,728,536
Rape—						
From Russia, qrs.	10,091	9,521	84,485	16,049	14,351	140,026
From British East Indies, qrs.	110,109	235,414	132,710	200,887	413,780	256,045
From other countries, qrs.	19,503	6,389	15,004	44,350	15,399	35,305
Totals, qrs.	139,703	251,324	232,199	261,286	443,530	431,376
Soya bean—						
From Russia, tons	.....	96,981	117,236	.....	713,706	866,618
From China, tons	.....	174,415	102,123	.....	1,263,706	759,658
From Japan, tons	.....	149,958	3,278	.....	1,068,898	25,960
From other countries, tons	.....	177	20	.....	738	147
Totals, tons	.....	421,531	222,657	.....	3,047,048	1,652,383
Unenumerated, qrs.	2,313,685	449,882	300,458	3,265,502	923,549	564,250
Oils:—						
Fish—						
Train, blubber and sperm, tuns	36,221	46,101	58,962	637,221	927,231	1,252,663
Cocoanut, unrefined, cwts.	502,408	539,686	545,963	752,251	1,013,629	1,001,227
Olive, unrefined, tuns	4,788	6,905	4,424	241,905	299,922	200,619
Palm, unrefined, cwts.	1,762,641	1,994,385	1,630,726	2,195,620	3,056,614	2,474,320
Petroleum—						
Crude, gals.	1,185,510	187,318	74,334	16,080	3,310	1,621
Lamp oils, gals.	146,817,880	138,828,483	142,575,809	2,294,006	1,850,918	1,708,913
Motor spirit,* gals.	51,923,281	55,049,210	68,167,317	1,212,692	1,340,551	1,612,267
Spirits, other than motor spirit, gals.		239,948	5,680		4,872	261
Lubricating oils, gals.	53,902,864	58,560,651	60,526,259	1,631,365	1,705,866	1,662,725
Gas oil, gals.	71,586,006	57,507,131	58,008,510	690,186	477,704	417,310
Fuel oil, gals.	32,687,326	34,363,276	33,074,138	276,273	262,455	230,950
Other sorts, gals.	.....	733,819	3,448,126	.....	17,206	59,854
Total of petroleum, gals.	358,102,967	345,469,836	365,880,233	6,121,202	5,662,882	5,693,901
Seed oil—						
Cottonseed oil, unrefined, tons	819	902	3,557	19,749	22,984	98,129
Linseed oil, pure, tons	19,936	37,242	28,847	491,297	1,252,141	1,170,165
Linseed oil, not pure, tons	1,685	1,221	381	30,395	25,477	13,301
Rapeseed oil, tons	11,532	13,489	8,408	295,915	359,166	246,193
Other sorts, tons	7,095	12,455	12,526	221,418	308,597	440,334
Turpentine, cwts.	433,375	472,247	480,130	699,807	1,001,216	914,028
Soap stock, cwts.	32,760	20,173	40,400	17,513	13,535	28,079
Tallow, unrefined and stearine:—						
From France, cwts.	40,134	43,756	31,056	83,097	93,005	53,305
From United States, cwts.	263,385	48,089	140,824	389,239	77,411	220,480
From Argentine Republic, cwts.	429,637	412,628	437,519	661,252	725,438	741,981
From Australia, cwts.	735,988	1,099,514	998,231	1,126,896	1,866,746	1,667,681
From New Zealand, cwts.	459,525	499,204	413,305	700,067	818,932	680,588
From other countries, cwts.	267,887	359,580	182,729	399,411	612,957	307,213
Totals	2,196,556	2,462,771	2,203,664	3,359,962	4,194,489	3,671,248

*Duty has been paid on 4,027,076 gallons during the month ended December 31, 1911, and on 58,418,763 gallons during the year ended December 31, 1911.

	Quantity, year ended Dec. 31.			Value, year ended Dec. 31.		
	1909.	1910.	1911.	1909. £	1910. £	1911. £
Gum:—						
Arabic, cwts.	84,710	107,369	125,849	134,136	176,066	242,984
Lac-dye, seedlac, shellac and sticklac, cwts.	135,144	174,081	99,666	493,817	627,619	339,887
Rosin, cwts.	1,419,968	1,500,623	1,485,431	676,494	880,582	1,089,685
Manures:—						
Basic slag, tons	15,286	16,588	22,666	25,927	26,985	37,889
Bones, whether burnt or not, tons	39,031	44,505	45,876	175,672	201,539	226,174
Guano, tons	20,321	20,395	34,124	89,147	107,958	193,000
Nitrate of soda (cubic niter), tons	90,207	126,498	128,487	860,860	1,161,127	1,189,019
Phosphate of lime and rock phosphate, tons	451,807	455,593	493,413	747,367	722,508	779,706
Quicksilver, lbs.	3,237,321	3,344,669	3,491,016	359,207	401,010	411,851
Chemicals:—						
Bleaching materials, cwts.	110,848	109,320	148,224	26,938	27,709	36,947
Boracite, borate of lime, borate of magnesium, and borax, cwts.	321,851	320,413	405,895	151,094	145,361	176,556
Brimstone, cwts.	417,509	403,438	418,662	107,025	102,968	107,136
Coal products, not dyes, cwts.	69,625	203,718	108,261	94,504	129,899	141,642
Cream of tartar, cwts.	70,928	81,983	72,384	257,574	306,999	301,940
Glycerine—						
Crude, cwts.	51,959	67,258	105,961	111,404	179,970	308,998
Distilled, cwts.	10,045	11,806	16,350	30,595	49,990	75,260
Muriate of ammonia, cwts.	5,149	4,946	6,342	7,242	6,538	8,264
Saltpeter (nitrate of potash), cwts.	210,711	227,510	223,915	200,148	216,358	218,304
Soda compounds, cwts.	213,751	177,086	186,269	113,223	123,172	156,221
Sulphuric acid, cwts.	74,246	69,759	61,513	4,900	4,680	5,022
Tartaric acid, cwts.	37,202	44,385	39,089	172,117	203,365	200,299
Unenumerated, including acetate of lime, acetic acid, acetone and carbide of calcium	.....	.....	.....	2,319,153	2,385,530	2,196,671
Drugs and medicines:—						
Bark, Peruvian	21,645	22,469	20,401	35,759	39,520	37,169
Quinine and quinine salts.	2,720,185	3,184,995	3,291,960	82,556	90,771	98,056
Unenumerated	.....	.....	.....	1,082,653	1,126,667	1,262,938
Dye stuffs (other than dye woods) and substances used in tanning or dyeing:—						
Dye stuffs—						
Cutch	41,200	64,040	101,545	49,283	86,803	139,233
Dyes and dye stuffs obtained from coal tar—						
Alizarine and anthracene dye stuffs	55,901	61,575	59,736	244,196	283,180	257,833
Aniline and naphthalene dye stuffs	239,956	256,175	264,941	1,318,727	1,452,653	1,414,294
Synthetic indigo	33,494	28,196	24,287	117,100	101,249	85,143
Other coal tar dye stuffs	713	257	212	3,965	1,308	895
Extracts for dyeing	.....	.....	.....	158,121	156,359	143,140
Indigo	10,051	3,350	4,917	139,335	43,054	67,430
Unenumerated	156,511	155,709	117,219	236,137	221,148	228,930
Tanning substances—						
Bark, for tanning	549,438	560,038	650,834	225,059	225,642	243,128
Extracts for tanning	.....	.....	.....	775,397	749,410	739,329
Gambier	125,880	101,120	100,233	169,531	155,102	140,744
Myrobalans	559,314	860,679	515,216	153,119	225,168	138,844
Sumac	243,840	222,240	226,919	128,092	105,620	103,981
Valonia	438,420	358,420	248,093	27,370	169,948	121,227
Unenumerated	22,425	21,468	14,412	15,096	12,760	7,991
Painters' colors and pigments:—						
Barytes	819,703	908,505	965,344	121,397	134,639	134,530
Nickel oxide	19,460	17,297	15,117	96,348	86,150	74,312
Red lead	.....	.....	72,618	.....	.....	58,798
White lead	317,579	288,731	335,511	268,707	240,372	283,747
Zinc oxide	278,829	304,183	349,213	302,417	323,937	369,247
Unenumerated	637,470	860,304	748,888	683,936	786,167	759,748
Totals	2,072,841	2,379,020	2,486,691	1,472,805	1,571,265	1,680,382
Total of chemicals, drugs, dyes and colors	.....	.....	.....	10,596,598	11,259,685	11,411,832
Oil seed cake, not sweetened:—						
Cottonseed cake, tons	164,642	157,277	198,226	968,032	952,884	1,123,291
Linseed cake, tons	113,187	104,210	52,819	889,763	860,015	428,012
Rapeseed cake, tons	16,222	23,169	51,091	81,351	111,034	212,707
Unenumerated, tons	34,712	32,410	35,289	191,248	185,671	194,299
Totals, tons	328,763	317,066	337,425	2,130,394	2,109,604	1,958,309
Paraffine wax, cwts.	1,049,004	1,064,369	1,012,848	1,126,035	1,017,014	815,838
Soap—						
Soft soap, cwts.	1,969	1,956	3,441	2,515	2,328	3,879
Household and laundry soap, in bars or tablets, cwts.	190,046	187,164	178,115	227,052	225,358	212,688
Polishing and scouring soap, cwts.	946	1,685	3,874	1,450	1,764	4,754
Powder, cwts.	35,790	38,691	39,430	37,430	40,154	43,409
Toilet, cwts.	13,109	14,979	14,134	88,748	99,905	95,058
Unenumerated, cwts.	103,627	75,695	103,198	76,702	70,904	84,689
Total value of imports	.....	.....	.....	624,704,957	678,257,024	680,559,175

Exports of Produce and Manufactures of the United Kingdom.

	Quantity, year ended Dec. 31.			Value, year ended Dec. 31.		
	1909.	1910.	1911.	1909. £	1910. £	1911. £
Oils, refined:—						
Cocoanut, cwts.	121,105	228,109	62,075	221,302	430,663	126,698
Cottonseed, tons	21,590	29,501	22,379	534,810	874,571	661,925
Olive, tuns	378	368	272	45,555	49,125	41,858
Palm, cwts.	16,827	13,710	8,766	22,544	23,458	14,478
Totals,	.....	.....	.....	824,211	1,377,817	844,959
Grease and unrefined tallow and animal fats, cwts.	712,369	719,705	579,187	929,228	965,688	730,185
Oils:—						
Cocoanut, unrefined, cwts.	61,247	73,173	39,403	89,327	126,710	72,827
Olive, unrefined, tuns	61	22	13	3,457	1,354	726
Palm, unrefined, cwts.	1,582	48,214	28,635	2,252	84,801	53,062
Oil, seed:—						
To Germany, tons	2,313	5,140	4,803	52,943	141,723	146,822
To Netherlands, tons	1,557	8,160	4,956	35,683	232,813	146,270
To Belgium, tons	5,623	6,752	2,645	123,397	186,657	80,539
To Austria-Hungary, tons	541	1,040	1,098	14,115	33,496	38,770
To Egypt, tons	1,562	1,502	1,380	38,314	51,253	55,697
To Brazil, tons	2,886	3,116	3,593	75,019	119,304	153,575
To British India, tons	1,304	1,079	1,260	34,321	37,750	50,155
To Straits Settlements, tons	473	393	494	13,466	14,994	22,972
To Ceylon, tons	100	75	87	2,578	2,781	3,669
To Australia, tons	4,708	4,783	5,892	129,691	188,468	269,011
To Canada, tons	570	1,946	2,874	13,863	68,252	111,341
To other countries, tons	21,567	34,905	26,496	553,991	1,134,565	971,168
Total—						
Cottonseed oil, unrefined, tons	194	411	337	4,718	11,979	9,317
Linseed oil:						
Pure, tons	20,009	21,463	23,555	536,516	837,712	1,050,956
Not pure, tons	2,303	3,021	3,326	54,538	98,851	120,403
Rapeseed oil, tons	5,052	5,052	6,258	136,448	141,368	188,794
Soya bean oil, tons	15,646	38,944	20,407 1,695	355,161	1,122,146	628,125 52,394
Other seed oils, tons						
Totals, tons	43,204	68,891	55,578	1,087,381	2,212,056	2,049,989
Bleaching powder:—						
To United States, cwts.	572,360	625,674	536,635	116,856	123,273	105,980
To other countries, cwts.	339,494	381,907	377,047	79,980	87,264	88,721
Totals, cwts.	911,854	1,007,581	913,682	195,836	210,537	194,701
Coal products, not dyes:—						
Aniline oil and toluidine, lbs.	2,050,639	1,834,861	1,606,344	43,639	42,241	39,814
Anthracene, lbs.	1,809,862	88,523	680,544	5,717	170	1,804
Benzol and toluol, gals.	2,380,201	2,672,768	4,068,739	81,120	89,107	137,193
Carbolic acid, cwts.	95,681	141,557	160,475	104,296	118,484	162,503
Coal tar, crude, cwts.	99,718	101,055	121,367	13,579	14,585	19,117
Coal tar, refined and varnish, gals.	2,673,377	2,180,142	2,132,912	43,261	38,449	41,006
Naphtha, gals.	773,134	808,790	934,898	27,080	28,410	34,204
Naphthalene, cwts.	90,376	76,839	73,064	21,880	20,797	28,110
Pitch, cwts.	9,957,057	9,262,433	9,317,470	595,416	719,108	833,848
Tar oil, creosote, etc., gals.	26,821,756	34,558,053	29,728,992	399,415	464,528	397,431
Other sorts, cwts.	386,231	344,605	463,347	119,798	133,514	187,639
Totals	.....	.....	.....	1,455,210	1,678,783	1,882,660
Copper, sulphate of, tons	44,830	42,706	79,831	854,278	783,425	1,508,990
Dye stuffs:—						
Products of coal tar, cwts.	54,255	56,080	47,901	203,974	196,215	178,681
Other sorts, cwts.	202,684	189,592	165,950	136,868	141,134	123,124
Totals, cwts.	256,939	245,672	213,851	340,842	337,349	301,805

	Quantity, year ended Dec. 31.			Value, year ended Dec. 31.		
	1909.	1910.	1911.	1909. £	1910. £	1911. £
Glycerine:—						
Crude, cwts.	115,950	149,976	126,986	239,766	338,565	326,742
Distilled, cwts.	84,190	88,086	106,560	236,739	314,615	446,665
Totals, cwts.	200,140	238,062	233,546	476,505	653,180	773,407
Manures:—						
Sulphate of ammonia—						
To Germany	30,495	7,020	2,740	347,522	80,583	36,982
To France	11,820	8,432	7,239	135,397	99,681	94,884
To Spain and Canaries	60,478	55 617	60,657	695,284	661,046	799,594
To Italy	11,008	10,202	10,162	128,337	121,429	128,550
To Dutch East Indies	23,027	32,122	28,182	267,136	385,000	371,261
To Japan	49,395	57,360	76,095	564,450	670,099	977,022
To United States	35,029	76,111	65,920	395,687	917,608	873,607
To British West India Islands (including Bahamas and British Guiana)	12,311	11,707	11,758	141,765	141,135	159,048
To other countries	30,579	25,039	29,130	354,874	300,127	389,148
Totals	264,142	283,610	291,883	3,030,452	3,376,708	3,830,096
Superphosphates	141,422	152,572	159,353	331,048	351,555	393,662
Basic slag	218,813	231,277	195,950	327,942	343,144	295,497
Unenumerated	139,816	152,527	158,173	691,289	851,031	976,835
Totals of manures	764,193	819,966	805,359	4,380,731	4,922,438	5,496,030
Medicines, comprising drugs and medicinal preparations:—						
Opium, dried and powdered in the United Kingdom	.....	32,281	55,791	.....	24,091	78,982
Quinine and quinine salts	1,300,861	1,360,782	1,841,527	55,065	56,866	75,080
Other sorts	.....	.....	.....	1,663,021	1,794,376	1,859,189
Totals	.....	.....	.....	1,718,086	1,875,333	2,013,251
Muriate of ammonia	131,202	132,478	154,056	168,247	171,201	186,956
Painters' colors and materials:—						
Barytes	180,843	229,894	168,421	30,104	38,118	30,542
White lead	377,060	404,401	402,210	367,647	401,897	422,636
Zinc oxide	42,265	38,221	39,943	48,421	44,595	46,126
Unenumerated	1,543,012	1,692,488	1,687,199	1,958,495	2,208,695	2,330,233
Totals	2,143,180	2,365,004	2,297,773	2,404,667	2,693,305	2,829,537
Soda compounds:—						
Soda ash	1,918,892	2,168,927	2,479,098	415,695	470,973	535,592
Soda bicarbonate	460,241	458,542	518 736	122,726	118,144	130,909
Soda caustic	1,583,454	1,659,175	1,621,093	818,680	861,081	793,365
Soda chromate and bichromate of soda or potash	94 234	107,381	86,048	133,673	173,038	119,751
Soda crystals	215,157	248,484	268,595	35,761	40,926	43,667
Soda sulphate (saltcake)	709,552	1,160,561	1,168,871	50,514	98,466	108,635
Soda, other sorts	422,678	483,677	476,509	125,936	132,224	132,423
Totals	5,395,181	6,286,747	6,618,880	1,702,985	1,874,752	1,864,342
Sulphuric acid	144,864	133,063	96,269	50,386	51,792	38,816
Tartaric acid	6,934	7,593	6,985	28,388	31,298	38,240
Chemicals, other sarts	.....	.....	.....	3,006,858	3,284,743	2,964,390
Total of chemicals, drugs, dyes and colors	.....	.....	.....	16,783,019	18,568,136	20,093,134
Oil seed cake, not sweetened:—						
Cottonseed cake, tons	6,071	10,150	5,188	31,544	49,613	28,978
Linseed cake, tons	130	682	2,815	1,012	5,021	24,729
Rapeseed cake, tons	630	.....	427	2,950	.....	1,603
Soya bean cake, tons	}		(97,879			(593,243
Unenumerated, tons	} 103,039	164,590	(11,556	642,660	1,032,549	} 73,612
Totals, tons	110,470	175,422	118,065	678,166	1,087,183	722,145
Paraffine wax, cwts.	348,266	289,824	285,010	407,024	288,457	252,472
Total of soap, cwts.	1,322,070	1,492,463	1,650,409	1,536,368	1,797,543	1,982,847
Total value of exports, the produce and manufacture of the United Kingdom	.....	.....	.....	378,180,347	430,384,772	454,282,460

Exports of Foreign and Colonial Merchandise.

	Quantity, year ended Dec. 31.			Value, year ended Dec. 31.		
	1909.	1910.	1911.	1909. £	1910. £	1911. £
Oils, refined:—						
Cocoanut, cwts.	7,841	9,364	10,388	13,410	20,464	22,311
Cottonseed, tons	1,960	1,170	787	51,058	39,315	28,888
Olive, tuns	748	734	627	54,028	53,713	46,460
Palm, cwts.	504	.....	33	408	.....	78
Totals	.....	.....	.....	118,904	113,492	97,737
Spices:—						
Cinnamon, lbs	377,428	350,901	675,057	16,559	9,469	15,997
Ginger, cwts.	19,751	16,410	14,845	38,400	38,272	33,922
Pepper, lbs.	6,060,288	5,356,011	5,223,359	90,012	102,854	107,275
Unenumerated, lbs.	5,938,480	5,837,482	8,411,483	107,240	113,266	180,475
Saccharin and mixtures containing saccharin or other substances of like nature or use	40,230	97,640	141,201	602	748	1.243
Oil seeds:—						
Flax or linseed, qrs.	45,409	167,067	80,001	102,714	527,707	276,273
Rape, qrs.	11,557	3,631	1,969	24,794	7,417	5,008
Oil:—						
Cocoanut, unrefined, cwts.	108,991	112,692	62,438	168,108	229,203	124,460
Cottonseed, unrefined, tons	34	61	33	788	1,316	914
Olive, unrefined, tuns	297	401	457	13,134	13,920	19,083
Palm, unrefined, cwts.	1,016,690	1,205,690	894,445	1,226,233	1,820,598	1,330,040
Petroleum—						
Crude, gals.	59,710	19,276	86	1,010	340	7
Lamp oils, gals.	1,171,987	1,926,391	718,021	28,825	34,532	16,041
Motor spirit, gals.	944,706	1,280,917	3,635,446	19,637	29,364	104,251
Spirit, other than motor spirit, gals.		1,897	24		57	4
Lubricating oils, gals.	1,278,244	1,479,038	1,275,748	51,190	58,277	56,293
Gas oil, gals.	984,776	1,174,993	970,411	18,055	18,357	15,681
Fuel oil, gals.	790,836	89,746	485,016	844	1,250	6,635
Other sorts, gals.	.....	.....	.....	.....	.....	.....
Total of petroleum, gals.	4,510,259	5,978,258	7,084,752	119,561	142,177	198,912
Soap stock, cwts.	1,322	240	1,349	761	200	1,814
Tallow, unrefined, and stearine, cwts.	1,068,778	1,295,752	1,173,389	1,645,574	2,259,427	2,000,367
Gum:—						
Arabic, cwts.	20,440	33,068	74,363	35,740	60,179	129,124
Lac-dye, seedlac, shellac and sticklack, cwts.	67,762	58,847	42,859	270,097	221,249	159,962
Manures, guano, tons	2,006	5,597	1,954	9,420	28,688	10,308
Quicksilver, lbs.	1,653,868	1,856,160	2,357,916	183,096	207,803	259,037
Chemicals:—						
Boracite, borate of lime, borate of magnesium and borax, cwts.	2,873	965	281	1,715	507	259
Coal products, not dyes, cwts.	3,221	15,944	48,284	3,247	3,311	13,918
Cream of tartar, cwts.	8,500	9,738	11,985	32,932	40,257	53,986
Glycerine:—						
Crude, cwts.	15,543	18,559	17,066	32,223	49,843	54,872
Distilled, cwts.	40	1	558	139	4	2,701
Muriate of ammonia, cwts.	474	30	550	692	43	811
Saltpeter (nitrate of potash), cwts.	6,925	6,581	8,050	6,441	6,321	7,710
Sulphuric acid, cwts.	17	...	7	17	.....	9
Tartaric acid, cwts.	2,416	3,082	5,194	12,133	15,207	28,602
Unenumerated (including carbide of calcium)	.....	.....	.....	746,122	658,387	106,291
Drugs and medicines:—						
Bark Peruvian, cwts.	7,440	9,296	5,754	13,650	19,317	9,348
Quinine and quinine salts, ozs.	211,627	184,278	210,005	6,487	4,972	5,722
Dye stuffs (other than dye woods) and substances used in tanning or dyeing:—						
Dye stuffs—						
Cutch, cwts.	40,100	24,200	28,345	33,157	29,636	35,073
Extracts for dyeing	.....	.....	.....	10,167	18,336	11,062
Indigo, cwts.	4,023	3,769	2,839	62,474	56,487	46,906
Tanning substances—						
Bark for tanning, cwts.	361,780	412,574	482,320	162,418	178,425	187,587
Extracts for tanning	.....	.....	.....	46,957	36,576	28,142
Gambier, cwts.	33,600	9,640	11,003	43,748	14,564	14,340
Myrobalans, cwts.	172,824	142,056	7,986	47,136	35,883	2,491
Sumac, cwts.	83,160	52,160	68,060	42,777	25,711	31,115
Valonia, cwts.	11,140	8,380	12,764	5,539	4,352	5,886
Unenumerated, cwts.	13,619	6,836	1,779	7,976	3,362	894
Painters' colors and pigments:—						
Barytes, cwts.	2,312	4,410	2,250	437	698	377
Nickel oxide, cwts.	85	.....	.....	500	.....	.....
Red lead, cwts.	.....	.....	137	.....	.....	152
White lead, cwts.	662	40	51	676	38	60
Zinc oxide, cwts.	1,432	1,405	1,684	1,641	1,556	2,152
Unenumerated, cwts.	22,762	16,426	11,048	28,647	20,136	18,681
Total of chemicals, drugs, dyes and colors	.....	.....	.....	1,831,322	1,939,126	1,426,824
Total value of exports of foreign and colonial merchandise	.....	.....	.....	91,344,819	103,761,045	102,720 799

IMPORTS INTO THE UNITED STATES.

Acids, Acetic or Pyroligneous.

	Pounds.	Dollars.
1907	72,799	8,398
1908	149,099	18,652
1909	1,126,256	178,961
1910	1,069,151	90,785
1911	78,886	6,172

Acid, Anhydrid.

	Pounds.	Dollars.
1911	1,170,485	218,676

Acid, Arsenic.

	Pounds.	Dollars.
1907	614,406	28,638
1908	198,660	9,606
1909	784,524	19,517
1910	2,108,954	64,567
1911	3,175,861	95,422

Acid, Benzoic.

	Pounds.	Dollars.
1907	615,430	149,217
1908	800,242	189,657
1909	491,739	102,513
1910	364,650	82,444
1911	502,878	111,345

Acid, Boracic.

	Pounds.	Dollars.
1907	796,261	28,425
1908	414,046	19,773
1909	230,968	7,641
1910	416,842	13,610
1911	343,094	12,733

Acid, Carbolic.

	Pounds.	Dollars.
1907	2,830,792	314,812
1908	3,891,758	349,003
1909	4,729,552	321,623
1910	4,507,893	275,090
1911	4,371,014	265,789

Acid, Chromic.

	Pounds.	Dollars.
1907	1,457	303
1908	1,735	407
1909	5,240	954
1910	9,375	1,540
1911	8,643	1,456

Acid, Citric.

	Pounds.	Dollars.
1907	149,208	57,661
1908	171,796	62,804
1909	243,010	74,209
1910	142,601	40,967
1911	97,847	28,717

Acid, Fluoric.

	Pounds.	Dollars.
1907	771	48
1908	76,933	4,260
1909	346	16
1910	.....	.....
1911	100	6

Acid, Formic.

	Pounds.	Dollars.
1907	215,921	13,708
1908	325,483	24 217
1909	809,444	57,329
1910	769,712	53,699
1911	964,345	63,171

Acid, Gallic.

	Pounds.	Dollars.
1907	22,610	7,084
1908	9,594	3,031
1909	54,509	17,075
1910	79,264	23,468
1911	45,964	13,861

Acid, Hydrochloric or Muriatic.

	Pounds.	Dollars.
1907	8,310	149
1908	6,805	209
1909	8,520	172
1910	1,143	27
1911	.....	.....

Acid, Lactic.

	Pounds.	Dollars.
1907	47,708	5,140
1908	82,671	11,069
1909	185,935	18,022
1910	218,004	17,396
1911	201,371	16,470

Acid, Nitric.

	Pounds.	Dollars.
1907	1,239	60
1908	59	3
1909	130	10
1910	.....	.....
1911	.....	.....

Acid, Oxalic.

	Pounds.	Dollars.
1907	7,205,246	376,869
1908	8,853,539	524,836
1909	9,797,901	621,387
1910	5,875,179	340,985
1911	7,053,899	363,351

Acid. Phosphoric.

	Pounds.	Dollars.
1907	311,451	49,979
1908	209,926	34,087
1909	144,462	24,503
1910	306,175	47,573
1911	405,007	53,775

Acid, Phthalic.

	Pounds.	Dollars.
1907	19,190	4,477
1908	22,010	4,415
1909	8,248	1,834
1910	39,044	12,851
1911	52,474	14,252

Acid, Picric.

	Pounds.	Dollars.
1907	97,441	17,401
1908	21,597	5,000
1909	100,307	16,903
1910	85,210	15,629
1911	47,700	8,277

Acid, Pyrogallic.

	Pounds.	Dollars.
1907	38,088	39,617
1908	32,357	34,007
1909	23,889	24,762
1910	37,167	25,260
1911	22,145	14,188

Acid, Salicylic.

	Pounds.	Dollars.
1907	9,181	2,397
1908	2,849	967
1909	1,998	968
1910	64,373	10,478
1911	32,876	5,297

Acid, Silicic.

	Pounds.	Dollars.
1907	.....	.....
1908	50	8
1909	6,573	353
1910	1,430	198
1911	11,698	242

Acid, Stearic.

	Pounds.	Dollars.
1911	36,610	3,451

Acid, Sulphuric, or Oil of Vitriol.

	Pounds.	Dollars.
1907	124,155	1,845
1908	38,895	1,087
1909	38,296	660
1910	36,648	1,663
1911	38,079	526

Acid, Tannic or Tannin.

	Pounds.	Dollars.
1907	6,381	2.707
1908	935	518
1909	986	939
1910	8,196	4.371
1911	5,755	2,259

Acid, Tartaric.

	Pounds.	Dollars.
1907	11,573	3,876
1908	57,718	11,355
1909	124,774	23,245
1910	36,684	1,663
1911	331,538	72,204

Acid, Valerianic.

	Pounds.	Dollars.
1907	6,607	2,900
1908	7,381	2,842
1909	2,145	1,191
1910	2,502	1.4 4
1911	1,633	1,088

Acids, All Other.

		Dollars.
1907	.....	49,740
1908	.....	54,887
1909	.....	47,142
1910	.....	47,615
1911	.....	59,079

Aconite.

	Pounds.	Dollars.
1907	2,361	196
1908	4,355	321
1909	.....	.....
1910	.....	.....
1911	7,959	613

Albumen, Blood.

	Pounds.	Dollars.
1907	19,256	18,031
1908	70,488	12,186
1909	265,595	45,977
1910	196,472	29,595
1911	116,439	19,973

Albumen, Egg.

	Pounds.	Dollars.
1907	563,575	238,232
1908	404,262	191,408
1909	408,492	195,078
1910	699,612	268,732
1911	903,504	349,960

Albumen Not Especially Provided For.

	Pounds.	Dollars.
1907	9,219	1,284
1908	995	124
1909	2,000	286
1910	7,737	1,243
1911	4,054	442

Alcohol, Wood.

	Gallons.	Dollars.
1907	46,607	21,420
1908	7,833	2,510
1909	348	113
1910	13,413	5,690
1911	366	319

Alizarin, Natural or Artificial, and Dyes Therefrom.

	Pounds.	Dollars.
1907	3,949,813	674,414
1908	3,874,586	753,371
1909	3,750,899	1,215,700
1910	3,005,854	647,948
1911	3,188,037	709,960

Alum, Alum Cake, Patent, Sulphate of Alumina, Crystals or Ground.

	Pounds.	Dollars.
1907	2,597,513	24,582
1908	2,667,639	25,695
1909	2,646,276	24,022
1910	364,922	3,568
1911	1,237,249	11,908

Alumina, Hydrate of, or Refined Bauxite.

	Pounds.	Dollars.
1907	27,512	1,206
1908	360,198	6,807
1909	20,310	1,524
1910	1,538,619	26,230
1911	1,998,908	32,554

Ambergris.

	Pounds.	Dollars.
1907	22	3,308
1908	12	2,652
1909	2	300
1910	21	4,001
1911	171	22,518

Ammonia, Carbonate of.

	Pounds.	Dollars.
1907	527,703	28,840
1908	395,639	23,817
1909	414,683	24,752
1910	485,803	26,279
1911	332,877	21,779

Ammonia, Muriate of.

	Pounds.	Dollars.
1907	14,713,623	765,580
1908	8,375,308	425,573
1909	7,575,483	387,599
1910	12,573,713	616,161
1911	13,951,116	698,025

Ammonia, Phosphate of.

	Pounds.	Dollars.
1907	101,589	6,980
1908	33,344	2,631
1909	36,894	3,032
1910	41,007	2,321
1911	68,039	4,640

Ammonia, Sulphate of.

	Pounds.	Dollars.
1907	65,337,283	1,770,222
1908	71,161,740	1,847,772
1909	79,453,025	2,014,560
1910	126,356,356	3,126,308
1911	207,486,060	5,301,333

Aniline Salts.

	Pounds.	Dollars.
1907	9,869,633	793,179
1908	5,451,874	466,432
1909	6,130,517	543,538
1910	5,870,905	515,552
1911	5,133,723	450,106

Annatto, Roucou and Extract of.

	Pounds.	Dollars.
1907	651,595	51,128
1908	551,872	40,780
1909	711,191	48,329
1910	619,372	39,579
1911	632,742	30,445

Antimony, Salts of.

	Pounds.	Dollars.
1907	585,380	105,234
1908	709,662	73,667
1909	595,095	65,596
1910	414,713	20,407
1911	942,616	50,371

Apatite.

	Tons.	Dollars.
1907	1	18
1908	½	9
1909	2,926	19,023
1910	.....	.....
1911	.....	.....

Argols or Crude Tartar, or Wine Lees, Crude.

	Pounds.	Dollars.
1907	30,515,017	2,558,249
1908	26,471,774	2,289,956
1909	32,111,324	2,640,003
1910	28,264,058	2,218,514
1911	29,269,977	2,940,188

Argols, Partly Refined.

	Pounds.	Dollars.
1907	23,466	2,634
1908	257,979	14,200
1909	3,224	347
1910	34,710	3,893
1911	18,847	3,130

Arrowroot, Unmanufactured.

	Pounds.	Dollars.
1907	1,076	158
1908	33,323	1,478
1909	3,895	102
1910	1,382	140
1911	12,756	514

Arsenic.

	Pounds.	Dollars.
1907	2,829,828	406,129
1908	9,330,843	503,009
1909	10,048,793	378,778
1910	5,981,717	218,438
1911	6,916,069	203,766

Artists' Colors. In Tubes, Pans, Cakes, Etc.

		Dollars.
1907	.....	95,871
1908	.....	105,888
1909	.....	109,958
1910	.....	79,882
1911	.....	80,130

Ashes, Wood and Lye of, and Beet Root Ashes.

		Dollars.
1907	.....	66,784
1908	.....	56,689
1909	.....	60,268
1910	.....	60,220
1911	.....	50,973

Asphaltum and Bitumen, Crude.

	Tons.	Dollars.
1907	118,443	557,224
1908	140,230	553,052
1909	115,754	514,082
1910	128,268	559,744
1911	146,509	692,213

Balsam Copaiba.

	Pounds.	Dollars.
1907	225,988	74,614
1908	372,802	98,699
1909	234,257	73,095
1910	208,566	66,279
1911	191,154	56,918

Balsam Fir.

	Pounds.	Dollars.
1907	20,436	7,131
1908	8,863	3,565
1909	4,673	2,375
1910	16,645	8,432
1911	15,788	7,128

Balsam Peru.

	Pounds.	Dollars.
1907	15,303	11,817
1908	28,024	26,171
1909	25,843	24,217
1910	50,363	49,132
1911	37,910	47,840

Balsam Storax.

	Pounds.	Dollars.
1907	11,861	1,645
1908	7,063	1,047
1909	19,582	2,449
1910	19,189	2,226
1911	26,544	3,309

Balsam Tolu.

	Pounds.	Dollars.
1907	23,069	3,865
1908	35,585	5,127
1909	39,668	5,589
1910	46,946	7,178
1911	21,802	3,328

Balsam, All Other Crude.

	Pounds.	Dollars.
1907	172,309	24,645
1908	45,583	12,352
1909	113,561	30,826
1910	137,463	31,681
1911	24,200	12,147

Barium, Binoxide of.

	Pounds.	Dollars.
1907	1,923,640	144,483
1908	2,623,642	200,932
1909	3,031,304	225,588
1910	3,563,528	261,674
1911	4,896,563	347,129

Barium, Chloride of.

	Pounds.	Dollars.
1907	5,033,613	65,468
1908	3,935,691	56,895
1909	4,402,767	57,696
1910	3,705,502	33,672
1911	2,742,486	29,771

Bark, Cinchona or Other from Which Quinine May Be Extracted.

	Pounds.	Dollars.
1907	3,517,981	381,216
1908	3,983,829	368,424
1909	3,502,385	263,112
1910	3,305,894	255,763
1911	4,136,354	341,896

Bark, Hemlock.

	Cords.	Dollars.
1907	6,193	27,786
1908	8,872	43,789
1909	20,312	126,559
1910	16,346	95,667
1911	10,536	65,957

Baryta, Carbonate or Witherite.

	Pounds.	Dollars.
1907	3,626,670	37,140
1908	2,342,769	23,290
1909	2,856,464	26,779
1910	3,090,986	28,749
1911	4,254,068	33,790

Baryta, Sulphate of, or Barytes Manufactured.

	Tons.	Dollars.
1907	8,480	81,447
1908	5,492	50,984
1909	2,879	27,156
1910	2,699	27,191
1911	3,263	26,462

Baryta, Sulphate of, or Barytes Non-Manufactured.

	Tons.	Dollars.
1907	12,022	43,033
1908	18,118	82,911
1909	13,378	47,505
1910	10,620	32,110
1911	18,394	45,062

Bay Rum and Water.

	Proof gallons.	Dollars.
1907	1,347	909
1908	1,918	1,504
1909	262	280
1910	661	639
1911	675	656

Beeswax.

	Pounds.	Dollars.
1907	918,995	265,172
1908	672,437	194,770
1909	794,895	231,559
1910	979,690	284,407
1911	904,960	270,119

Bismuth.

	Pounds.	Dollars.
1907	216,087	262,775
1908	225,833	313,919
1909	176,775	274,666
1910	200,221	316,838
1911	178,297	321,360

Blanc Fixe, Satin White and Artificial Sulphate of Lime.

	Pounds.	Dollars.
1907	6,362,861	71,504
1908	6,753,560	81,755
1909	5,917,619	67,097
1910	5,656,507	66,923
1911	6,332,699	73,278

Blood, Dried.

		Dollars.
1907	.....	94,023
1908	.....	46,321
1909	.....	191,706
1910	.....	224,381
1911	.....	448,739

Blue—Berlin, Prussian, Chinese, Etc., in Pulp, Dry or Ground.

	Pounds.	Dollars.
1907	192,211	39,445
1908	197,506	41,706
1909	188,104	39,008
1910	206,539	37,360
1911	189,681	34,804

Bone Black, Lamp Black, Etc.

	Pounds.	Dollars.
1907	820,157	29,210
1908	849,767	26,358
1909	570,950	22,430
1910	1,295,258	23,394
1911	.....	26,064

Bone Dust and Ash.

	Tons.	Dollars.
1907	6,157	140,683
1908	12,353	276,770
1909	22,545	543,048
1910	37,730	882,407
1911	44,635	1,134,443

Bones, Crude.

		Dollars.
1907	.....	401,911
1908	.....	431,128
1909	.....	478,069
1910	.....	641,704
1911	.....	739,906

Borate of Lime, or Soda, or Other Borate Material.

	Pounds.	Dollars.
1907	3,629	346
1908	2,640	132
1909	1,646	167
1910	19,201	1,855
1911	13,095	2,277

Borax.

	Pounds.	Dollars.
1907	1,450,823	48,118
1908	1,964,792	67,851
1909	341,658	13,173
1910	9,058	1,479
1911	7,319	799

Bristles, Sorted, Bunched, or Prepared.

1907	3,544,539	3,203,692
	Pounds.	Dollars.
1908	2,433,895	2,023,548
1909	2,809,130	2,469,490
1910	3,915,160	3,127,172
1911	3,409,878	2,879,295

Bristles, Crude, Not Sorted.

	Pounds.	Dollars.
1907	11,620	5,320
1908	7,831	8,110
1909	10,394	7,656
1910	17,124	12,632
1911	11,562	9,803

Bromides.

		Dollars.
1907	.....	2,712
1908	.....	716
1909	.....	876
1910	.....	41
1911	.....	.....

Bronze Powder.

	Pounds.	Dollars.
1907	1,582,372	586,464
1908	1,360,177	468,978
1909	1,335,260	419,972
1910	1,856,011	557,550
1911	1,557,070	455,029

Brushes.

		Dollars.
1907	.....	1,597,051
1908	.....	1,653,304
1909	.....	1,435,890
1910	.....	1,744,637
1911	.....	2,150,335

Buchu Leaves.

	Pounds.	Dollars.
1907	.....	38,890
1908	.....	23,096
1909	.....	45,559
1910	130,644	48,652
1911	106,345	81,658

Cadmium.

	Pounds.	Dollars.
1907	.....	7,232
1908	.....	2,166
1909	.....	4,643
1910	3,083	1,657
1911	5,956	3,718

Caffeine.

	Pounds.	Dollars.
1907	17,018	39,581
1908	12,531	30,902
1909	17,291	43,381
1910	60,463	160,491
1911	57,025	104,011

Calamine.

	Tons.	Dollars.
1907	.....	.....
1908	49,308	552,427
1909	48,763	580,626
1910	22,334	320,926
1911	29,542	391,872

Calcium, Chloride of.

	Pounds.	Dollars.
1907	241,019	1,432
1908	324,432	1,902
1909	149,599	587
1910	528,947	2,073
1911	.....	.....

Calomel and Other Mercurial Preparations.

	Pounds.	Dollars.
1907	36,724	21,352
1908	33,166	19,883
1909	35,366	21,700
1910	48,324	32,319
1911	.....	33,896

Camomile Flowers.

		Dollars.
1907	.....	7,115
1908	.....	5,653
1909	.....	7,528
1910	.....	19,615
1911	.....	19,110

Camphor, Crude.

	Pounds.	Dollars.
1907	3,138,397	1,572,881
1908	2,811,358	1,365,287
1909	1,990,499	602,530
1910	3,026,650	921,928
1911	3,726,319	1,118,586

Camphor, Refined.

	Pounds.	Dollars.
1907	462,976	373,137
1908	519,890	322,755
1909	430,564	151,960
1910	492,583	177,174
1911	492,111	165,296

Camwood.

	Tons.	Dollars.
1907	1	249
1908	1	76
1909	½	96
1910	.....	.....
1911	33	62

Candle Pitch, Palm and Other Vegetable Stearine.

	Pounds.	Dollars.
1907	.....	171,609
1908	.....	129,426
1909	3,252,322	73,147
1910	3,398,952	55,102
1911	2,758,964	42,084

Candles and Tapers.

	Pounds.	Dollars.
1907	.....	48,301
1908	.....	52,345
1909	236,473	35,277
1901	151,906	26,009
1911	.....	.....

Cantharides.

	Pounds.	Dollars.
1908	41,222	21,782
1908	23,486	10,841
1909	4,624	2,371
1910	7,902	3,971
1911	12,317	6,684

Cassia.

	Pounds.	Dollars.
1907	7,128,228	625,251
1908	3,692,300	315,381
1909	6,817,484	558,783
1910	5,355,835	430,298
1911	6,446,787	522,228

Cassia Buds.

	Pounds.	Dollars.
1907	79,494	9,236
1908	638,979	64,355
1909	185,973	20,644
1910	117,764	7,196
1911	105,982	11,616

Castor.

	Ounces.	Dollars.
1907	4,851	2,619
1908	12,996	6,948
1909	2,553	1,721
1910	6,296	3,150
1911	5,072	3,077

Castor Beans.

	Bushels.	Dollars.
1907	488,459	667,167
1908	508,591	643,143
1909	613,709	679,980
1910	752,375	862,393
1911	790,241	1,005,850

Chalk, Unmanufactured.

	Tons.	Dollars.
1907	91,486	85,503
1908	125,871	113,588
1909	96,311	93,452
1910	116,115	103,847
1911	123,278	117,041

Chalk, Not Medicinal, Nor Prepared for Toilet Purposes, When Ground, Precipitated, or Otherwise Prepared, Including Tailors', Billiard, Red or French.

	Pounds.	Dollars.
1907	.....	46,379
1908	709,967	22,526
1909	1,363,005	32,225
1910	2,728,382	69,293
1911	3,826,118	92,423

China Clay, or Kaolin.

	Tons.	Dollars.
1907	211,467	1,432,342
1908	177,707	1,302,424
1909	193,493	1,359,108
1910	231,234	1,563,799
1911	228,598	1,550,247

Chloral Hydrate.

	Pounds.	Dollars.
1907	.....	.....
1908	10	9
1909	6,096	1,156
1910	.....	.....
1911	7,024	8,396

Chloroform.

	Pounds.	Dollars.
1907	3,624	1,575
1908	2,038	1,128
1909	1,756	1,231
1910	965	1,487
1911	1,010	1,782

Chrome, Yellow or Green.

	Pounds.	Dollars.
1907	128,961	19,515
1908	109,494	19,492
1909	170,073	23,107
1910	156,586	25,029
1911	156,733	25,516

Cinchonidia.

	Ounces.	Dollars.
1907	26,736	4,031
1908	194,086	40,749
1909	60,332	11,590
1910	229,243	46,886
1911	17,272	4,219

Cinchona Bark, Alkaloids or Salts of, All Other.

	Ounces.	Dollars.
1907	1,250,191	223,809
1908	378,895	79,869
1909	204,207	40,357
1910	337,481	32,646
1911	615,840	58,942

Cinnamon.

	Pounds.	Dollars.
1907	777,597	106,827
1908	520,460	76,634
1909	1,022,846	93,856
1910	921,042	87,798
1911	1,147,428	100,640

Civet, Crude.

	Ounces.	Dollars.
1907	13,478	15,610
1908	6,752	18,182
1909	2,684	2,717
1910	5,888	5,715
1911	27,086	7,850

Clays of Earths, Not Specially Provided For.

	Tons.	Dollars.
1907	32,891	227,227
1908	27,331	179,150
1909	27,653	176,639
1910	26,952	164,495
1911	233,803	105,177

Cliffstone, Unmanufactured.

	Tons.	Dollars.
1907	5,846	10,746
1908	6,752	11,381
1909	10,767	16,437
1910	8,618	12,260
1911	.....	.....

Cloves.

	Pounds.	Dollars.
1907	3,491,372	509,128
1908	3,048,687	346,690
1909	5,844,535	565,851
1910	3,232,801	290,167
1911	4,088,527	533,152

Clove Stems.

	Pounds.	Dollars.
1907	50,305	914
1908	703,474	29,318
1909	293,316	8,111
1910	8,417	425
1911	6,481	905

Coal Tar Colors or Dyes Not Specially Provided For.

		Dollars.
1907	.....	5,657,837
1908	.....	4,907,954
1909	.....	5,895,612
1910	.....	6,016,034
1911	.....	6,061,715

Coal Tar and Pitch.

	Barrels.	Dollars.
1907	28,870	62,645
1908	35,456	71,589
1909	27,791	56,753
1910	35,658	83,924
1911	20,927	43,744

Coal Tar Preparations Not Colors, Dyes or Medicines, Not Specially Provided For.

		Dollars.
1907	.....	922,666
1908	.....	798,525
1909	.....	690,572
1910	.....	651,560
1911	.....	652,652

Coal Tar Products, Not Medicinal (Chemicals).

		Dollars.
1907	.....	562,794
1908	.....	598,807
1909	.....	708,108
1910	.....	1,686,554
1911	.....	6,061,715

Cobalt, Oxide.

	Pounds.	Dollars.
1907	41,539	83,026
1908	22,535	32,686
1909	6,361	8,549
1910	8,207	8,500
1911	14,561	7,576

Cocaine.

	Ounces.	Dollars.
1907	.....	37,585
1908	3,792	4,108
1909	32,272	48,343
1910	175,739	83,883
1911	4,031	8,366

Cocculus Indicus.

	Pounds.	Dollars.
1907	2,125	58
1908	.....	.....
1909	.....	.....
1910	.....	.....
1911	3,382	118

Cochineal.

	Pounds.	Dollars.
1907	184,326	84,911
1908	152,624	54,146
1909	102,694	33,875
1910	150,811	41,445
1911	102,670	25,269

Cocoa Butter, or Butterine.

	Pounds.	Dollars.
1907	4,418,839	1,226,554
1908	2,915,453	954,601
1909	4,896,798	1,126,517
1910	3,755,140	750,333
1911	4,395,452	1,112,778

Cocoa Leaves.

	Pounds.	Dollars.
1907	1,515,616	212,424
1908	633,121	76,109
1909	1,100,649	126,881
1910	708,546	98,454
1911	1,226,771	234,162

Colodian and Compounds of Pyroxylin.

	Pounds.	Dollars.
1907	1,132	2,196
1908	293	1,462
1909	521	2,159
1910	3,956	2,929
1911	56,640	132,167

Colombo Root.

	Pounds.	Dollars.
1907	9,901	258
1908	6,422	181
1909	3,022	101
1910	2,288	94
1911	8,436	610

Copperas, or Sulphate of Iron.

	Pounds.	Dollars.
1907	1,869	89
1908	4,022	193
1909	8,737	250
1910	69,466	3,472
1911	2,338	52

Copper, Sulphate of.

	Pounds.	Dollars.
1907	1,282,098	75,650
1908	280,484	15,480
1909	9,688	321
1910	3,481	169
1911	8,787	323

Corks.

	Pounds.	Dollars.
1907	2,278,870	1,544,355
1908	2,487,116	1,845,505
1909	1,217,989	917,656
1910	1,752,198	1,374,744
1911	2,585,284	2,178,919

Corkwood, or Cork Bark, Unm'f'd.

	Pounds.	Dollars.
1907	.....	2,358,873
1908	60,664,316	2,092,732
1909	78,330,391	2,016,534
1910	109,271,575	3,152,280
1911	139,602,251	4,286,760

Cottonseed Meal.

		Dollars.
1907	.....	1,132
1908	.....	2,131
1909	.....	4,669
1910	.....	.....
1911	.....	60

Cream of Tartar.

	Pounds.	Dollars.
1907	2,670	614
1908	12,242	2,083
1909	6,846	1,073
1910	116,278	9,902
1911	23,433	3,401

Cryolite or Kryolith.

	Tons.	Dollars.
1907	1,435	24,300
1908	1,425	27,941
1909	1,135	17,500
1910	1,294	19,107
1911	66	4,120

Cubebs.

	Pounds.	Dollars.
1907	110,570	9,202
1908	79,065	9,556
1909	87,050	12,780
1910	104,713	26,340
1911	129,014	44,896

Cudbear.

	Pounds.	Dollars.
1907	50,952	2,843
1908	24,795	1,315
1909	34,865	2,104
1910	35,863	2,130
1911	25,880	1,859

Cutch.

	Pounds.	Dollars.
1907	3,719,479	146,010
1908	2,078,468	66,895
1909	1,368,114	55,060
1910	28,477	1,278
1911	.....	.....

Cuttlefish Bone.

	Pounds.	Dollars.
1907	307,082	40,985
1908	201,861	31,755
1909	230,746	24,822
1910	301,615	441,451
1911	277,489	40,860

Dandelion Root.

	Pounds.	Dollars.
1907	93,306	6,217
1908	218,804	24,771
1909	47,884	3,058
1910	35,919	2,436
1911	72,223	4,717

Divi Divi.

	Pounds.	Dollars.
1907	132,491	2,084
1908	134,133	2,398
1909	186,943	3,166
1910	654,404	13,130
1911	496,130	8,169

Dragons' Blood.

	Pounds.	Dollars.
1907	26,690	8,189
1908	14,644	5,014
1909	43,396	11,682
1910	26,555	9,034
1911	12,034	5,513

Dutch Metal Leaf, Bronze.

	100 leaves.	Dollars.
1907	809,579	86,715
1908	641,537	70,550
1909	734,728	74,456
1910	779,688	80,217
1911	808,219	84,357

Ergot.

	Pounds.	Dollars.
1907	213,589	45,425
1908	106,576	23,709
1909	135,740	36,651
1910	181,614	52,911
1911	141,334	75,592

Ethers, Not Specially Provided For.

	Pounds.	Dollars.
1907	.....	.....
1908	476	565
1909	421	440
1910	190	223
1911	130	108

Ethers, Specific Duty Not Amounting to 25 Per Cent.

		Dollars.
1907	.....	2,507
1908	.....	882
1909	.....	7,360
1910	.....	3,656
1911	.....	8,451

Ethers, Sulphuric.

	Pounds.	Dollars.
1907	2,435	372
1908	2,949	526
1909	1,234	222
1910	337	75
1911	1,475	289

Extracts of Bark for Dyeing or Tanning, Not Specially Provided For.

	Pounds.	Dollars.
1907	284,593	7,448
1908	1,539,810	62,028
1909	4,339,596	156,798
1910	2,522,885	84,018
1911	1,746,675	61,389

Fertilizer, Not Specially Provided For. (Used only for manure.)

	Tons.	Dollars.
1907	184,680	2,364,206
1908	153,522	2,111,113
1909	198,554	2,747,074
1910	196,902	3,129,814
1911	191,975	3,914,508

Formaldehyde.

	Pounds.	Dollars.
1907	24,931	4,715
1908	21,815	5,978
1909	34,143	9,842
1910	34,269	9,394
1911	.....	.....

Fuller's Earth.

	Tons.	Dollars.
1907	15,255	126,376
1908	10,613	88,739
1909	11,489	100,269
1910	13,192	118,956
1911	15,813	125,899

Fustic.

	Tons.	Dollars.
1907	3,483	54,765
1908	4,452	53,884
1909	2,466	34,752
1910	5,816	82,887
1911	5,379	72,673

Gambier.

	Pounds.	Dollars.
1907	28,853,124	977,000
1908	26,692,100	895,210
1909	31,000,855	1,313,990
1910	25,808,720	1,264,023
1911	18,910,912	979,036

Gelatine.

	Pounds.	Dollars.
1907	1,335,701	445,931
1908	1,320,275	485,892
1909	1,151,390	385,141
1910	1,239,393	389,507
1911	1,327,970	237,678

Gentian Root.

	Pounds.	Dollars.
1907	1,225,850	41,622
1908	1,327,921	55,097
1909	1,485,389	62,445
1910	1,177,433	42,336
1911	1,537,919	56,902

Ginger Root, Unground.

	Pounds.	Dollars.
1907	4,161,681	286,830
1908	2,807,256	166,421
1909	5,595,305	374,504
1910	5,383,371	411,236
1911	7,363,088	582,161

Glass, Window — Cylinder, Crown, Plain, Unpolished.

	Pounds.	Dollars.
1907	31,185,759	978,597
1908	24,272,744	743,378
1909	22,754,650	692,803
1910	25,690,413	711,741
1911	29,698,311	825,381

Glass, Window—Cylinder, Crown and Common, Unpolished When Bent or Decorated.

	Pounds.	Dollars.
1907	911,991	65,979
1908	808,498	62,992
1909	993,568	79,368
1910	1,303,893	102,778
1911	1,390,770	114,171

Glass, Window—Cylinder, Crown, Plain, Polished, Unsilvered.

	Sq. feet.	Dollars.
1907	722,635	163,705
1908	466,618	108,213
1909	516,293	115,058
1910	716,865	156,508
1911	646,141	140,301

Glass, Window—Cylinder and Crown, Polished, Unsilvered When Bent or Decorated.

	Sq. feet.	Dollars.
1907	712,676	182,508
1908	258,047	95,791
1909	315,554	83,429
1910	415,702	98,720
1911	362,879	87,713

Glass, Clyinder and Crown—Polished, Silvered and L. G. Plates.

	Sq. feet.	Dollars.
1907	2,464	1,761
1908	5,548	3,265
1909	491	234
1910	939	270
1911	1,368	505

Glass, Window—Cylinder and Crown, Polished, Silvered When Ground, Bent or Decorated.

	Sq. feet.	Dollars.
1907	747	321
1908	2,574	1,048
1909	9	15
1910	250	105
1911	1,960	920

Glass, Plate—Rough.

	Sq. feet.	Dollars.
1907	344,672	16,355
1908	372,041	15,700
1909	284,669	13,576
1910	375,009	16,366
1911	335,843	13,170

Glass, Plate—Fluted, Rolled or Rough, Ground, Etc.

	Sq. feet.	Dollars.
1907	514,080	106,226
1908	481,153	102,482
1909	458,538	103,758
1910	382,205	81,884
1911	481,364	105,222

Glass Plate—Cast, Polished, Finished or Unfinished and Unsilvered.

	Sq. feet.	Dollars.
1907	6,707,495	1,394,447
1908	3,827,224	848,901
1909	2,279,934	499,885
1910	3,150,176	702,039
1911	3,873,979	853,909

Glass, Plate—Cast, Polished, Unsilvered When Bent or Decorated, Etc.

	Sq. feet.	Dollars.
1907	54,391	22,853
1908	56,460	15,855
1909	14,514	7,966
1910	59,216	24,185
1911	83,955	39,530

Glass, Plate—Cast, Polished, Silvered, When Bent or Otherwise Decorated.

	Sq. feet.	Dollars.
1907	3,311	670
1908	5,990	2,013
1909	7,486	2,553
1910	1,649	779
1911	6,488	2,486

Glass, Plate—Cast, Polished, Silvered and L. G. Plates, Exceeding in Size 144 Square Inches.

	Sq. feet.	Dollars.
1907	22,713	7,470
1908	2,726	928
1909	1,161	533
1910	6,374	1,946
1911	10,252	2,865

Glauber Salts.

	Tons.	Dollars.
1907	251	4,974
1908	192	4,162
1909	178	4,391
1910	338	6,484
1911	221	4,907

Glucose.

	Pounds.	Dollars.
1907	164,918	4,465
1908	357,465	9,438
1909	402,117	12,406
1910	146,729	4,226
1911	268,592	7,850

Glue.

	Pounds.	Dollars.
1907	6,732,405	628,300
1908	6,780,089	627,500
1909	6,415,265	647,528
1910	8,817,503	851,225
1911	8,089,745	786,615

Glue, Fish or Isinglass.

	Pounds.	Dollars.
1907	154,625	56,619
1908	132,458	50,481
1909	203,300	58,801
1910	333,792	76,643
1911	295,382	87,546

Glue, Size.

	Pounds.	Dollars.
1907	.....	6,332
1908	.....	5,035
1909	247,349	5,277
1910	131,325	4,315
1911	162,133	3,740

Glycerine, Crude.

	Pounds.	Dollars.
1907	37,136,812	2,375,100
1908	31,571,351	2,367,528
1909	35,494,897	2,930,482
1910	41,024,712	3,635,005
1911	40,192,804	4,339,290

Glycerine, Refined.

	Pounds.	Dollars.
1907	953,106	87,993
1908	927,933	101,843
1909	779,546	87,880
1910	237,756	37,559
1911	231,236	47,378

Gold Beaters' Molds and Skins.

		Dollars.
1907	.....	32,929
1908	.....	25,818
1909	.....	23,995
1910	.....	32,687
1911	.....	28,921

Gold Leaf.

	100 leaves.	Dollars.
1907	35,849	167,263
1908	35,796	68,417
1909	11,434	48,260
1910	9,030	39,902
1911	44,602	40,395

Grease Enfleurage.

	Pounds.	Dollars.
1907	176,339	397,851
1908	95,020	266,691
1909	91,562	368,469
1910	64,919	143,773
1911	128,656	232,821

Grease and Oils, Excepting Fish Oils Used in Soap Making.

	Pounds.	Dollars.
1907	15,204,866	676,925
1908	11,149,512	507,773
1909	18,702,286	879,554
1910	19,428,509	1,003,607
1911	19,188,777	1,106,382

Grease, Wool.

	Pounds.	Dollars.
1907	14,027,242	266,749
1908	12,324,409	291,749
1909	11,620,116	219,408
1910	13,396,097	230,538
1911	13,782,834	231,035

Grease and Oils, Other, Except Enfleurage.

		Dollars.
1907	.....	4,844
1908	.....	17,447
1909	.....	8,354
1910	.....	12,846
1911	.....	20,805

Guano.

	Tons.	Dollars.
1907	23,068	350,207
1908	28,647	380,352
1909	37,014	580,443
1910	46,819	819,879
1911	31,740	625,044

Gum, Aloes.

	Pounds.	Dollars.
1907	834,126	48,202
1908	821,527	50,508
1909	671,257	40,863
1910	944,007	57,638
1911	980,205	71,044

Gums, Amber.

	Pounds.	Dollars.
1907	49,507	376,512
1908	32,306	248,423
1909	37,904	313,517
1910	56,573	451,078
1911	54,666	436,692

Gum, Arabic.

	Pounds.	Dollars.
1907	7,084,468	393,581
1908	4,895,897	348,883
1909	4,153,958	273,987
1910	5,551,181	315,154
1911	5,765,582	432,564

Gum, Asafoetida.

	Pounds.	Dollars.
1907	120,215	16,626
1908	75,762	11,211
1909	42,335	6,143
1910	95,536	34,574
1911	114,686	70,802

Gum, Benzoin, Gamboge and Mastic.

	Pounds.	Dollars.
1907	88,216	25,538
1908	67,683	13,961
1909	69,146	26,025
1910	55,634	23,001
1911	98,366	35,758

Gum, Chicle.

	Pounds.	Dollars.
1907	4,403,154	1,485,155
1908	4,070,854	1,497,225
1909	4,411,942	1,724,883
1910	4,921,026	1,939,756
1911	5,368,566	2,551,344

Gum, Copal.

	Pounds.	Dollars.
1907	26,760,295	2,834,332
1908	24,960,397	2,813,695
1909	24,876,383	2,288,453
1910	15,837,432	976,603
1911	10,916,609	615,002

Gum, Dextrine, Etc.

	Pounds.	Dollars.
1907	4,820,207	142,320
1908	3,958,925	122,870
1909	6,062,353	184,476
1910	6,391,762	202,103
1911	6,357,790	190,660

Gum, Kauri and Damar.

	Pounds.	Dollars.
1911	12,187,319	1,472,961

Gum, Rosin, Crude.

	Pounds.	Dollars.
1907	.....	.....
1908	.....	.....
1909	11,469,113	277,774
1910	9,063,994	238,090
1911	445,811	10,938

Gum, Scammony.

	Pounds.	Dollars.
1907	.....	.....
1908	11,597	736
1909	.....	.....
1910	.....	.....
1911	200	134

Gum, Senegal.

	Pounds.	Dollars.
1907	298,258	17,960
1908	148,618	13,180
1909	111,942	8,728
1910	108,526	9,887
1911	281,211	27,612

Gum, Tragacanth.

	Pounds.	Dollars.
1907	1,379,883	383,116
1908	1,309,759	233,654
1909	1,315,091	310,187
1910	1,340,559	392,562
1911	1,261,227	390,623

Gum, Tragasol.

	Pounds.	Dollars.
1907	.....	10,651
1908	598,752	12,255
1909	998,278	20,163
1910	1,183,146	23,897
1911	1,056,158	21,628

Hop Extract and Lupulin.

		Dollars.
1907	.....	15,644
1908	.....	7,163
1909	.....	4,084
1910	.....	20,313
1911	.....	28,933

Hops.

	Pounds.	Dollars.
1907	5,733,386	1,813,306
1908	8,636,192	1,911,602
1909	7,383,907	1,335,300
1910	3,185,991	1,492,779
1911	8,541,524	2,700,761

Ichthyol.

	Pounds.	Dollars.
1907	32,372	41,947
1908	33,276	54,365
1909	74,217	113,494
1910	14,379	21,485
1911	39,745	59,504

Indigo, Crude.

	Pounds.	Dollars.
1907	7,170,836	1,233,515
1908	6,078,073	1,058,354
1909	6,249,975	1,400,286
1910	7,636,690	1,195,942
1911	6,908,751	1,152,518

Indigo, Carmined.

	Pounds.	Dollars.
1907	21,370	14,004
1908	9,439	6,098
1909	23,772	15,385
1910	17,869	11,598
1911	12,575	8,144

Indigo, Extracts or Pastes.

	Pounds.	Dollars.
1907	145,339	8,013
1908	140,291	14,391
1909	148,454	17,897
1910	142,831	16,435
1911	105,493	14,785

Iodine, Crude.

	Pounds.	Dollars.
1907	529,080	1,085,586
1908	175,929	342,771
1909	12,910	26,705
1910	771,083	1,051,036
1911	210,440	418,762

Iodine, Resublimed.

	Pounds.	Dollars.
1907	246	561
1908	5	15
1909	51	110
1910	7	24
1911	33	111

Iodoform.

	Pounds.	Dollars.
1907	18	59
1908	40	121
1909	3	12
1910	31	100
1911	33	111

Ipecac.

	Pounds.	Dollars.
1907	117,034	155,092
1908	27,370	28,449
1909	35,166	27,945
1910	36,261	29,738
1911	27,054	36,522

Iridium.

	Pounds.	Dollars.
1907	.....	49,455
1908	192 16-100	64,431
1909	384	121,940
1910	262	147,723
1911	3,282	161,137

Jalap.

	Pounds.	Dollars.
1907	147,080	14,962
1908	126,027	11,490
1909	66,096	15,096
1910	199,906	58,030
1911	230,679	61,415

Kainit, Kyanite and Kieserit.

	Tons.	Dollars.
1906	379,221	1,963,914
1907	344,005	2,347,695
1908	329,467	2,008,555
1909	344,526	1,974,105
1910	484,155	2,313,150

Kainit.

	Tons.	Dollars.
1910	470,241	2,268,863
1911	586,474	2,637,105

Kieserite.

	Tons.	Dollars.
1910	5,179	10,484
1911	2,109	3,564

Kyanite or Cyanite.

	Tons.	Dollars.
1910	8,735	44,303
1911	400	1,904

Lac, Crude, Seed, Button and Stick.

	Pounds.	Dollars.
1907	824,824	216,024
1908	319,150	98,746
1909	397,714	68,160
1910	498,500	45,210
1911	420,323	46,036

Lac, Dye.

	Pounds.	Dollars.
1907	.....	.....
1908	53,541	6,342
1909	.....	.....
1910	.....	.....
1911	2,650	386

Lac, Spirits.

	Pounds.	Dollars.
1907	.....	10
1908	.....	21
1909	.....	1
1910	.....	14,227
1911	.....	33,557

Lactarene, or Casein.

	Pounds.	Dollars.
1907	.....	92,621
1908	263,471	13,471
1909	2,447,432	184,815
1910	3,769,476	304,001
1911	13,011,618	1,100,466

Lard.

	Pounds.	Dollars.
1907	4,021	396
1908	2,924	295
1909	2,468	269
1910	3,812	447
1911	.....	.....

Lead, Acetate of—Brown, Gray or Yellow.

	Pounds.	Dollars.
1907	16,891	940
1908	11,719	736
1909	.....	.....
1910	15,814	766
1911	15,624	728

Lead, Acetate, White.

	Pounds.	Dollars.
1907	3,176	268
1908	350	51
1909	140	37
1910	9,437	536
1911	2,476	141

Lead, Nitrate.

	Pounds.	Dollars.
1907	277,382	16,996
1908	221,355	11,797
1909	208,365	9,651
1910	131,707	6,760
1911	166,325	8,623

Lead, Pig.

	Pounds.	Dollars.
1907	24,276,855	1,043,166
1908	4,455,176	176,509
1909	5,484,739	177,948
1910	8,378,314	269,245
1911	5,928,666	182,400

Lemon, Lime and Sour Orange Juice.

		Dollars.
1907	.....	98,658
1908	.....	102,746
1909	.....	81,386
1910	.....	65,318
1911	.....	88,084

Licorice Paste.

	Pounds.	Dollars.
1907	748,836	82,910
1908	644,457	76,515
1909	51,084	66,641
1910	813,602	106,237
1911	886,856	120,149

Licorice Root.

	Pounds.	Dollars.
1907	96,144,397	1,141,384
1908	109,359,556	1,864,504
1909	97,742,776	1,628,894
1910	82,209,935	1,365,576
1911	126,140,623	2,080,571

Lime.

	Pounds.	Dollars.
1907	39,111,634	95,115
1908	23,105,823	66,889
1909	13,451,775	56,400
1910	18,085,581	79,781
1911	10,771,700	57,203

Lime, Chloride, or Bleaching Powder

	Pounds.	Dollars.
1907	106,279,185	880,917
1908	90,096,813	753,578
1909	83,376,089	684,427
1910	93,838,195	750,140
1911	99,478,325	802,015

Lime, Citrate.

	Pounds.	Dollars.
1907	3,872,924	726,626
1908	3,853,105	580,293
1909	3,917,274	489,031
1910	4,114,256	568,175
1911	5,219,544	712,004

Lime and Soda, Hypophosphites of.

	Pounds.	Dollars.
1907	3,920	736
1908	38,262	2,052
1909	162,920	3,648
1911	.....	.....

Linseed.

	Bushels.	Dollars.
1907	82,806	117,781
1908	51,482	65,702
1909	597,671	837,961
1910	5,002,842	8,553,533
1911	10,499,962	21,384,809

Litharge.

	Pounds.	Dollars.
1907	66,200	3,162
1908	100,187	4,303
1909	89,754	3,098
1910	91,529	4,204
1911	16,843	764

Logwood.

	Tons.	Dollars.
1907	37,901	478,656
1908	21,809	248,578
1909	17,873	166,371
1910	31,270	353,311
1911	35,340	424,123

Logwood and Other Dyewood Extracts.

	Pounds.	Dollars.
1907	4,542,257	368,704
1908	3,576,676	230,475
1909	3,463,582	231,612
1910	2,937,626	187,124
1911	3,799,604	197,280

Mace.

	Pounds.	Dollars.
1907	458,107	124,046
1908	425,183	96,736
1909	653,610	151,851
1910	510,499	123,557
1911	562,626	193,879

Madder, Ground or Prepared.

	Pounds.	Dollars.
1907	62,633	5,721
1908	50,856	5,249
1909	37,910	3,019
1910	30,709	2,312
1911	45,430	4,206

Magnesia, Calcined (Medicinal).

	Pounds.	Dollars.
1907	30,769	7,301
1908	52,492	8,623
1909	49,026	5,687
1910	57,417	9,299
1911	65,739	10,410

Magnesia, Carbonate of (Medicinal).

	Pounds.	Dollars.
1907	45,857	6,813
1908	101,394	4,855
1909	42,325	2,509
1910	56,106	3,744
1911	43,666	2,628

Magnesia, Sulphate of, or Epsom Salts.

	Pounds.	Dollars.
1907	4,113,167	16,072
1908	3,631,245	12,094
1909	8,053,235	26,158
1910	6,147,159	27,330
1911	6,204,219	23,092

Magnesite, Calcined, Not Purified.

	Pounds.	Dollars.
1907	143,891,572	698,715
1908	146,860,776	706,088
1909	186,961,370	871,384
1910	225,895,904	1,026,982
1911	296,225,507	1,362,120

Magnesite, Crude.

	Pounds.	Dollars.
1907	44,648,577	156,722
1908	42,722,846	141,902
1909	20,725,355	39,558
1910	34,175,514	108,623
1911	37,951,190	127,344

Magnesium, Not Made Up.

		Dollars.
1906	.....	10,930
1907	.....	14,762
1908	.....	10,222
1909	.....	17,845
1910	.....	399
1911	.....	.....

Manganese, Ore and Oxide of.

	Tons.	Dollars.
1907	205,295	1,672,654
1908	218,568	1,773,018
1909	165,000	1,243,657
1910	247,226	1,594,425
1911	209,566	1,453,177

Manna.

	Pounds.	Dollars.
1907	126,908	24,301
1908	76,748	28,039
1909	69,942	21,250
1910	47,658	17,307
1911	47,427	21,424

Menthol.

	Pounds.	Dollars.
1907	20,655	39,800
1908	20,183	33,240
1909	23,975	36,963
1910	23,651	43,234
1911	50,533	122,977

Milk, Sugar of.

	Pounds.	Dollars.
1907	4,760	959
1908	1,085	204
1909	195	58
1910	4,960	1,940
1911	4,732	1,848

Mineral Salts.

	Pounds.	Dollars.
1907	61,678	23,612
1908	220,732	36,381
1909	199,618	35,623
1910	78,630	29,624
1911	55,388	32,766

Morphia, or Morphine, Sulphate of.

	Ounces.	Dollars.
1907	524	820
1908	753	2,713
1909	152	392
1910	13,082	60,137
1911	20,345	95,067

Musk, Crude (in Natural Pods).

	Ounces.	Dollars.
1907	18,410	123,464
1908	9,295	81,599
1909	5,464	38,271
1910	9,388	56,322
1911	8,823	71,739

Musk, in Grain.

		Dollars.
1907	.....	3,370
1908	.....	3,505
1909	.....	2,208
1910	.....	1,169
1911	.....	4,119

Mustard, Ground.

	Pounds.	Dollars.
1907	1,307,202	339,088
1908	1,214,721	324,363
1909	1,743,218	445,432
1910	1,185,029	301,632
1911	1,278,840	22,578

Myrabolams.

	Pounds.	Dollars.
1907	.....	198,688
1908	20,988,206	299,441
1909	42,667,676	441,584
1910	55,445,896	484,570
1911	23,595,695	184,513

Nutgalls.

		Dollars.
1907	.....	156,158
1908	.....	58,170
1909	.....	150,358
1910	.....	104,710
1911	.....	97,557

Nutmegs.

	Pounds.	Dollars.
1907	2,375,822	321,652
1908	2,043,470	237,142
1909	2,644,791	219,329
1910	2,164,878	166,622
1911	2,392,251	210,409

Nux Vomica.

	Pounds.	Dollars.
1907	1,431,010	27,320
1908	2,986,896	53,872
1909	1,666,957	27,370
1910	2,738,602	35,170
1911	4,330,402	58,183

Ocher, Crude and Powdered, Washed or Pulverized.

	Pounds.	Dollars.
1907	12,040,820	108,481
1908	10,393,390	83,308
1909	11,437,490	91,050
1910	15,266,164	122,189
1911	13,295,207	118,759

Ocher, Ground in Oil or Water.

	Pounds.	Dollars.
1907	99,130	1,777
1908	18,566	1,002
1909	12,741	614
1910	14,413	769
1911	10,669	547

Oil, Alizarine, Assistant.

	Gallons.	Dollars.
1907	141,558	30,383
1908	110,439	25,532
1909	110,842	42,584
1910	97,097	38,600
1911	96,188	43,106

Oil, Almond, Bitter.

	Pounds.	Dollars
1907	21,133	23,010
1908	136,437	24,261
1909	22,233	16,642
1910	22,350	18,764
1911	14,143	19,308

Oil Almond, Sweet.

	Pounds.	Dollars.
1907	158,568	38,827
1908	96,528	29,765
1909	118,704	41,483
1910	94,380	34,194
1911	107,223	38,692

Oil, Amber.

	Pounds.	Dollars.
1907	4,063	1,080
1908	9,314	11,554
1909	18,050	1,294
1910	9,001	1,098
1911	14,553	845

Oil, Aniline.

	Pounds.	Dollars.
1907	2,176,194	196,381
1908	1,783,529	180,165
1909	1,950,620	204,758
1910	1,946,805	199,165
1911	1,917,202	186,332

Oil, Anise or Anise Seed.

	Pounds.	Dollars.
1907	67,677	73,558
1908	77,704	88,041
1909	99,262	84,595
1910	48,231	42,943
1911	82,127	80,132

Oil, Bergamot.

	Pounds.	Dollars.
1907	106,962	263,225
1908	94,967	284,173
1909	89,958	281,211
1910	438,155	133,490
1911	65,199	222,225

Oil, Cajeput.

	Pounds.	Dollars.
1907	54,659	10,071
1908	35,107	6,689
1909	12,687	1,687
1910	27,604	8,157
1911	22,663	8,049

Oil Cake.

	Pounds.	Dollars.
1907	475,779	5,047
1908	2,854,391	27,964
1909	1,716,505	18,219
1910	5,185,380	59,644
1911	12,407,460	139,332

Oil, Camomile.

	Pounds.	Dollars.
1907	327	646
1908	45	356
1909	12	138
1910	68	348
1911	32	400

Oil, Camphor.

	Pounds.	Dollars.
1909	124,354	16,818
1910	114,710	13,874
1911	4,088	555

Oil, Caraway.

	Pounds.	Dollars.
1907	31,731	28,666
1908	22,893	24,123
1909	16,204	19,290
1910	60,007	42,560
1911	43,487	30,794

Oil, Cassia and Cinnamon.

	Pounds.	Dollars.
1907	137,191	72,572
1908	69,652	83,304
1909	133,194	119,343
1910	108,183	82,051
1911	80,224	56,673

Oil, Castor.

	Gallons.	Dollars.
1907	5,086	4,693
1908	5,845	5,911
1909	6,847	5,829
1910	7,417	7,050
1911	7,065	7,007

Oil, Cedrat.

	Pounds.	Dollars.
1907	710	1,273
1908	47	263
1909	297	950
1910	210	612
1911	129	955

Oil, Citronella or Lemongrass.

	Pounds.	Dollars.
1907	820,310	307,769
1908	692,257	222,790
1909	1,038,838	261,748
1910	907,016	213,568
1911	831,723	190,982

Oil, Cocoanut.

	Pounds.	Dollars.
1907	35,555,603	2,628,016
1908	45,389,600	3,264,863
1909	52,302,999	3,085,970
1910	48,034,004	3,341,921
1911	51,121,085	4,144,454

Oil, Cod.

	Gallons.	Dollars.
1910	658,400	167,803
1911	596,847	182,238

Oil, Codliver.

	Gallons.	Dollars.
1907	218,097	136,202
1908	246,680	152,041
1909	209,155	105,474
1910	273,585	136,404
1911	230,844	201,394

Oil, Cottonseed.

	Gallons.	Dollars.
1907	26,151	9,342
1908	202	81
1909	9,300	3,686
1910	15,988,054	809,004
1911	17,686,375	1,147,683

Oil, Creosote.

	Gallons.	Dollars.
1907	22,462,819	1,118,949
1908	22,411,092	1,419,075
1909	39,060,490	2,220,809
1910	36,719,782	2,168,240
1911	45,499,838	2,384,501

Oil, Croton.

	Pounds.	Dollars.
1907	18	11
1908	916	501
1909	150	84
1910	2,412	1,081
1911	3,156	1,878

Oil, Fennel.

	Pounds.	Dollars.
1907	51,521	4,301
1908	18,421	2,944
1909	16,533	3,516
1910	9,896	2,609
1911	7,169	2,542

Oil, Fish (Not Specially Provided For), Including Sod Oil.

	Gallons.	Dollars.
1907	598,858	142,703
1908	905,808	222,486
1909	827,012	201,476
1910	546,820	147,159
1911	875,066	276,460

Oil, Fruit Ethers.

	Pounds.	Dollars.
1907	470	1,439
1908	156	176
1909	627	749
1910	1,000	775
1911	68	140

Oil, Fusel or Amylic Alcohol.

	Gallons.	Dollars.
1907	4,783,145	575,296
1908	4,452,535	652,130
1909	3,560,261	441,982
1910	4,970,538	599,909
1911	5,176,344	839,460

Oil Hempseed.

(In 1909 included with Rapeseed Oil.)

	Gallons.	Dollars.
1910	471,002	154,866
1911	20,439	7,524

Oil, Jasmine.

	Pounds.	Dollars.
1907	2,321	21,933
1908	3,666	20,194
1909	2,339	36,865
1910	2,899	31,739
1911	1,851	30,766

Oil, Juniper.

	Pounds.	Dollars.
1907	18,024	10,636
1908	13,950	8,213
1909	21,647	13,521
1910	16,563	9,628
1911	21,457	10,110

Oil, Lavender.

	Pounds.	Dollars.
1907	201,244	259,179
1908	143,422	255,642
1909	255,134	315,041
1910	101,373	148,971
1911	126,683	180,232

Oil, Lemon.

	Pounds.	Dollars.
1907	487,717	423,133
1908	440,326	592,533
1909	405,695	358,197
1910	415,819	310,543
1911	430,768	323,552

Oil, Limes.

	Pounds.	Dollars.
1907	16,474	5,139
1908	6,765	4,976
1909	21,995	9,973
1910	8,025	9,137
1911	9,122	9,466

Oil, Linseed.

	Gallons.	Dollars.
1907	14,184	5,702
1908	11,417	5,837
1909	28,102	13,249
1910	467,664	258,390
1911	3,959,475	2,711,560

Oil, Mace.

	Pounds.	Dollars.
1907	2,120	1,061
1908	1,850	924
1909	2,200	983
1910	7,799	3,063
1911	2,385	1,033

Oil, Neroli.

	Pounds.	Dollars.
1907	8,669	181,304
1908	11,271	118,301
1909	23,185	170,342
1910	26,053	70,433
1911	16,207	49,306

Oil, Chinese, Nut.

	Gallons.	Dollars.
1907	2,515,643	1,044,016
1908	1,874,217	858,782
1909	2,897,319	1,151,016
1910	2,494,896	846,635
1911	5,840,739	2,204,016

Oil, Olive (For Manufacturing Purposes).

	Gallons.	Dollars.
1907	1,845,701	794,574
1908	1,789,001	814,826
1909	695,223	306,674
1910	1,063,477	629,666
1911	717,494	486,788

Oil, Olive (Salad).

	Gallons.	Dollars.
1907	3,389,516	2,724,550
1908	3,548,649	3,733,720
1909	3,728,386	4,677,514
1910	3,597,953	4,817,413
1911	4,193,543	5,799,715

Oil, Orange.

	Pounds.	Dollars.
1907	112,834	199,027
1908	71,224	165,982
1909	87,591	151,860
1910	46,814	65,488
1911	73,786	99,303

Oil, Origanum, Red or White.

	Pounds.	Dollars.
1907	6,053	985
1908	6,976	1,608
1909	2,657	741
1910	1,823	541
1911	849	273

Oil, Palm.

	Pounds.	Dollars.
1907	29,660,048	1,888,660
1908	32,615,073	1,849,611
1909	58,971,777	3,185,038
1910	92,630,668	5,584,862
1911	57,251,758	4,096,362

Oil, Peppermint.

	Pounds.	Dollars.
1907	16 642	18,839
1908	2,039	8,869
1909	1,239	6,416
1910	1,099	5,697
1911	2,127	12,126

Oil, Poppy Seed.

	Gallons.	Dollars.
1907	5,184	3,243
1908	5,633	4,203
1909	6,598	4,840
1910	7,565	5,234
1911	18,686	14,071

Oil, Rapeseed.

In 1909 included with Hempseed Oil.

1910	963,216	417,746
1911	1,355,182	597,599

Oil, Rendered and Combinations, Not Specially Provided For.

	Gallons.	Dollars.
1907	139,363	26,775
1908	83,188	18,154
1909	19,835	4,333
1910	6,390	1,593
1911	.....	36,442

Oil, Roses, Attar of.

	Ounces.	Dollars.
1907	111,504	411,483
1908	60,826	308,256
1909	102,416	454,808
1910	57,991	222,431
1911	87,949	395,975

Oil, Rosemary.

	Pounds.	Dollars.
1907	98,999	43,330
1908	69,826	31,921
1909	85,421	41 792
1910	51,832	22,917
1911	94,098	42,049

Oil, Seal.

	Gallons.	Dollars.
1907	790	221
1908	.....	.....
1909	11,469	8,144
1910	55,977	19,787
1911	230,726	87,410

Oil, Sesame.

	Pounds.	Dollars.
1907	1,600,410	121,607
1908	1,072,253	92,230
1909	1,274,032	103,658
1910	1,310,186	94,933
1911	1,478,897	119,543

Oil, Soya Bean.

	Pounds.	Dollars.
1910	.....	1,019,842
1911	41,105,920	2,555,707

Oil, Thyme.

	Pounds.	Dollars.
1907	71,781	41,263
1908	43,384	37,546
1909	60,117	37,272
1910	46,325	32,592
1911	42,317	35,956

Oil, Valerian.

	Pounds.	Dollars.
1907	34	98
1908	9	74
1909	18	83
1910	52	353
1911	35	120

Oil, Whale.

	Gallons.	Dollars.
1907	24,708	8,376
1908	52,386	20,584
1909	27,948	9,934
1910	567,716	222,879
1911	1,284,190	445,331

Opium, Aqueous Extract of, and Tinctures of, as Laudanum.

		Dollars.
1907	.....	22
1908	.....	600
1909	.....	407
1910	.....	342
1911	.....	3,693

Opium, Crude.

1907	44,121	1,134,681
1908	320,415	1,182,739
1909	465,781	1,831,689
1910	412,444	1,453,172
1911	502,407	1,644,301

Opium Salts and Other Alkaloids Not Specially Provided For.

	Pounds.	Dollars.
1908	2,050	6,625
1909	3,782	10,115
1910	21,870	63,406
1911	480	2,545

Opium, Smoking, and Containing Less Than 9 Per Cent. of Naphtha.

	Pounds.	Dollars.
1906	139,106	1,305,283
1907	151,915	1,460,400
1908	147,624	1,382,096
1909	*118,509	1,072,591
1910	.....	.....

* After April 1, 1909, the importation of opium for smoking was prohibited.

Opium, Dried, Powdered, or Otherwise Advanced.

	Pounds.	Dollars.
1910	27,934	128,000
1911	67,962	304,200

Orange, Mineral.

	Pounds.	Dollars.
1907	729,056	42,084
1908	481,575	29,412
1909	514,129	27,806
1910	541,273	29,591
1911	923,254	36,577

Orchil, or Orchil Liquid.

	Pounds.	Dollars.
1907	.....	31,880
1908	.....	29,924
1909	.....	45,818
1910	.....	38,769
1911	.....	42,559

Orris Root.

	Pounds.	Dollars.
1907	629,537	43,018
1908	296,095	19,019
1909	529,054	27,229
1910	636,589	44,947
1911	555,698	42,223

Oxide of Iron and Spanish and Indian Red.

	Pounds.	Dollars.
1907	.....	71,534
1908	.....	74,812
1909	.....	51,029
1910	.....	66,816
1911	.....	82,514

Palladium.

	Pounds.	Dollars.
1907	.....	4,768
1908	3-100	21
1909	6 2-100	2,377
1910	56	14,622
1911	843	37,588

Paraffine.

(Not including oil.)

	Pounds.	Dollars.
1907	3,972,748	230,037
1908	17,812,789	169,131
1909	4,043,127	227,498
1910	6,424,331	309,424
1911	9,518,547	436,875

Paraffine, Manufactures of.

		Dollars.
1907	.....	.....
1908	.....	84
1909	.....	96
1910	.....	4,320
1911	.....	.....

Paris Green and London Purple.

	Pounds.	Dollars.
1907	158,346	17,764
1908	195,573	35,226
1909	211,856	22,550
1910	192,647	15,392
1911	22,193	2,361

Pepper, Black and White, Unground.

	Pounds.	Dollars.
1907	24,322,640	2,232,876
1908	20,335,693	1,532,901
1909	37,094,824	2,115,413
1910	15,423,284	1,103,701
1911	23,193,416	1,697,027

Pepper, Cayenne, Capsicum or Red Pepper.

	Pounds.	Dollars.
1907	4,222,163	351,763
1908	3,425,387	301,574
1909	4,711,947	386,980
1910	4,319,764	393,039
1911	5,242,284	557,759

Perfumery, Alcoholic, Toilet Waters, Etc.

	Pounds.	Dollars.
1907	359,573	655,854
1908	175,497	484,509
1909	244,230	694,280
1910	208,783	582,531
1911	245,539	709,652

Perfumery, Cosmetics and Toilet Preparations Not Including Alcohol, Not Specially Provided For.

		Dollars.
1907	.....	577,783
1908	.....	605,561
1909	.....	707,610
1910	.....	595,715
1911	.....	798,586

Petroleum, Crude.

	Gallons.	Dollars.
1907	357,057	25,615
1908	1,394,556	91,829
1909	8,232	1,421
1910	3,563,971	98,624
1911	10,755,888	233,774

Petroleum, Refined, Benzine.

	Gallons.	Dollars.
1907	2,473,215	160,191
1908	10,052,896	423,894
1909	6,148,241	328,636
1910	10,531,785	548,889
1911	10,755,888	233,774

Phosphorus.

	Pounds.	Dollars.
1907	30,287	13,268
1908	26,902	11,806
1909	34,606	15,116
1910	33,074	14,423
1911	40,676	17,783

Phosphate, Crude.

	Tons.	Dollars.
1907	23,307	160,131
1908	28,350	168,296
1909	17,398	128,629
1910	17,668	204,341
1911	18,980	203,326

Pimento.

	Pounds.	Dollars.
1907	4,172,976	193,423
1908	2,118,917	96,698
1909	10,077,241	339,870
1910	4,350,489	157,627
1911	5,659,208	156,542

Pitch, Burundy.

	Pounds.	Dollars.
1907	298,938	9,863
1908	441,547	13,747
1909	814,389	25,800
1910	1,364,166	35,210
1911	1,077,360	41,763

Pitch, Marine Glue.

	Pounds.	Dollars.
1907	.....	.....
1907	.....	62,645
1908	.....	8,835
1909	93,041	7,193
1910	156,236	11,044
1911	207,276	10,743

Plaster Rock or Gypsum, Crude.

	Tons.	Dollars.
1907	390,065	457,047
1908	352,953	421,422
1909	288,741	341,309
1910	340,339	407,906
1911	342,528	408,151

Plasters, Curative.

		Dollars.
1907	.....	9,469
1908	.....	9,462
1909	.....	8,279
1910	.....	5,412
1911	.....	3,964

Plumbago.

	Tons.	Dollars.
1907	20,554	1,626,730
1908	13,362	1,206,016
1909	15,986	1,463,717
1910	21,597	1,894,266
1911	20,152	1,677,963

Potash, Bicarbonate of

	Pounds.	Dollars.
1906	44,850	2,192
1907	210,281	6,787
1908	218,007	11,560
1909	342,856	16,915
1910	334,300	16,633
1911	325,016	16,428

Potash, Bichromate and Chromate of.

	Pounds.	Dollars.
1907	9,428	685
1908	118,325	8,447
1909	171,542	12,330
1910	877,151	43,037
1911	22,880	1,099

Potash, Carbonate of, Crude.

	Pounds.	Dollars.
1907	7,126,172	182,989
1908	7,806,802	269,318
1909	9,628,966	324,540
1910	8,407,373	263,643
1911	10,680,341	327,400

Potash, Carbonate of, Refined.

	Pounds.	Dollars.
1907	18,652,608	583,730
1908	16,856,159	575,731
1909	11,009,479	379,592
1910	9,036,267	303,917
1911	11,143,144	396,728

Potash, Caustic or Hydrate of, Unrefined.

	Pounds.	Dollars.
1907	7,463,792	266,502
1908	5,941,219	241,995
1909	7,041,657	294,709
1910	8,785,491	358,855
1911	7,426,402	309,965

Potash, Caustic or Hydrate of, Refined.

	Pounds.	Dollars.
1907	40,692	4,545
1908	46,768	4,967
1909	127,611	9,289
1910	141,430	11,095
1911	82,854	9,254

Potash, Chlorate of.

	Pounds.	Dollars.
1907	20,570	1,486
1908	13,268	1,052
1909	20,801	1,655
1910	413,885	26,698
1911	25,089	2,096

Potash, Cyanide of.

	Pounds.	Dollars.
1907	3,070,005	483,789
1908	3,328,375	494,915
1909	2,752,983	386,354
1910	2,422,607	328,146
1911	2,325,289	326,972

Potash, Hydriodate Iodide and Iodide of.

	Pounds.	Dollars.
1907	357	797
1908	2,477	610
1909	251	508
1910	142	275
1911	272	519

Potash, Muriate of

	Pounds.	Dollars.
1907	231,327,378	3,863,311
1908	236,949,002	3,885,419
1909	297,337,838	4,758,907
1910	391,854,497	5,640,541
1911	428,565,280	6,449,575

Potash, Prussiate of Red.

	Pounds.	Dollars.
1907	56,989	11,811
1908	52,149	10,697
1909	77,255	13,522
1910	65,777	12,460
1911	55,082	10,250

Potash, Prussiate of Yellow.

	Pounds.	Dollars.
1907	1,453,320	148,580
1908	820,583	88,637
1909	1,754,377	178,74
1910	2,330,871	229,907
1911	1,777,313	180,584

Potash, Sulphate of

	Pounds.	Dollars.
1907	58,306,202	1,013,045
1908	56,552,031	1,030,471
1909	61,016,263	1,148,607
1910	84,970,450	1,399,915
1911	106,269,944	1,952,370

Pumice.

	Tons.	Dollars.
1907	.....	109,109
1908	6,110	88,031
1909	5,734	77,210
1910	8,850	105,473
1911	5,783	58,755

Putty, Whiting and Paris White, Ground in Oil.

	Pounds.	Dollars.
1907	3,519	114
1908	132	6
1909	76	7
1910	17,995	270
1911	77,581	1,151

Quebracho Extract.

	Pounds.	Dollars.
1907	76,479,846	2,234,386
1908	62,593,671	2,037,648
1909	99,108,284	2,685,021
1910	90,483,576	2,857,618
1911	77,606,709	3,213,344

Quebracho Wood.

	Tons.	Dollars.
1907	67,310	840,779
1908	48,871	612,971
1909	66,093	731,795
1910	80,210	1,058,647
1911	64,703	952,726

Quicksilver.

	Pounds.	Dollars.
1907	15,282	6,147
1908	1,324	604
1909	30,857	16,301
1910	677	366
1911	361,332	191,108

Quicksilver, Flasks or Bottles.

		Dollars.
1907	.....	.....
1908	.....	360
1909	.....	14,887
1910	.....	45,140
1911	.....	.....

Quinia, Sulphate of.

	Ounces.	Dollars.
1907	3,242,923	423,054
1908	1,851,953	282,931
1909	2,065,765	285,125
1910	2,345,472	318,375
1911	2,469,082	347,241

Red Lead.

	Pounds.	Dollars.
1907	895,822	45,209
1908	495,341	26,574
1909	862,226	33,568
1910	822,617	33,460
1911	1,035,254	40,225

Rennets.

		Dollars.
1907	.....	117,344
1908	.....	152,312
1909	.....	97,691
1910	.....	92,459
1911	.....	110,142

Rhubarb.

	Pounds.	Dollars.
1907	379,356	58,650
1908	132,496	22,738
1909	63,715	7,508
1910	107,341	16,147
1911	125,816	13,950

Rosin, Prepared.

		Dollars.
1907	.....	7,652
1908	.....	6,274
1909	.....	5,741
1910	.....	60,536
1911	.....	7,037

Rotten Stone and Tripoli.

		Dollars.
1907	.....	30,115
1908	.....	21,628
1909	.....	22,458
1910	.....	28,546
1911	.....	53,611

Saffron, Extract of, and Saffron Cake.

		Dollars.
1907	.....	74,468
1908	.....	70,569
1909	.....	67,648
1910	.....	80,760
1911	.....	88,214

Sago, Crude, and Soap Flour.

	Pounds.	Dollars.
1907	9,746,344	160,071
1908	11,280,746	169,437
1909	16,796,780	231,170
1910	7,515,712	127,883
1911	11,765,106	196,304

Salicin.

	Pounds.	Dollars.
1907	6,396	16,004
1908	3,822	13,031
1909	3,324	12,091
1910	5,437	19,441
1911	3,282	11,802

Salt.

	Pounds.	Dollars.
1907	330,636,962	474,833
1908	337,372,867	471,477
1909	291,756,496	437,892
1910	276,752,586	374,420
1911	282,455,660	390,043

Salt Cake.

	Tons.	Dollars.
1907	3,044	37,044
1908	208	2,169
1909	18	767
1910	3,928	40,640
1911	11,398	121,218

Saltpeter, Crude.

	Pounds.	Dollars.
1907	12,797,141	398,477
1908	16,748,117	517,334
1909	17,470,648	512,473
1910	25,144,975	675,765
1911	9,228,567	282,835

Saltpeter, Refined.

	Pounds.	Dollars.
1907	301,350	15,833
1908	326,759	17,487
1909	415,281	14,421
1910	2,610,941	115,457
1911	851,681	38,384

Santonin and All Salts of, Containing 80 Per Cent. or Over of Santonin.

	Pounds.	Dollars
1907	8,233	65,032
1908	4,393	16,396
1909	7,257	15,549
1910	7,391	52,778
1911	4,291	39,678

Sarsaparilla Root.

	Pounds.	Dollars.
1907	657,809	76,066
1908	663,752	71,258
1909	570,124	52,967
1910	560,858	59,786
1911	379,091	43,849

Seed, Anise.

	Pounds.	Dollars.
1907	744,116	43,418
1908	467,644	27,221
1909	784,891	52,205
1910	938,957	44,537
1911	1,144,845	66,131

Seed, Canary.

	Bushels	Dollars
1907	92,810	96,145
1908	77,659	68,222
1909	79,614	58,924
1910	6,919	6,027
1910	*6,768,334	132,058
1911	6,552,722	138,585

*Pounds.

Seed, Caraway.

	Pounds.	Dollars.
1907	2,495,663	150,813
1908	2,027,271	142,292
1909	2,508,905	207,457
1910	2,951,702	179,770
1911	2,856,098	150,997

Seed, Cardamom.

	Pounds.	Dollars.
1907	124,562	31,586
1908	60,875	23,578
1909	104,981	45,612
1910	126,267	51,740
1911	94,398	45,788

Seed, Coriander.

	Pounds.	Dollars.
1907	1,562,470	49,538
1908	1,011,505	21,117
1909	1,146,734	30,502
1910	1,386,064	52,065
1911	1,069,099	35,826

Seed, Cotton.

	Pounds.	Dollars.
1907	1,600,359	9,957
1908	1,944,994	11,962
1909	1,266,968	8,118
1910	922,751	5,300
1911	1,365,415	13,358

Seed, Cumin and Fenugreek.

	Pounds.	Dollars.
1907	1,830,268	71,509
1908	1,679,951	57,320
1909	1,548,342	68,440
1910	*	.....

* Cumin now separately enumerated. Fenugreek included with fennel.

Seed, Cumin.

(Included with fenugreek heretofore.)

	Pounds.	Dollars.
1910	651,957	42,116
1911	615,668	42,301

Seed, Fenugreek and Fennel.

	Pounds.	Dollars.
1910	1,265,565	27,432
1911	1,643,651	40,798

Seed, Fennel.

	Pounds.	Dollars.
1907	169,778	8,625
1908	69,416	3,603
1909	113,623	6,972
1910	*	.....

*Included with fenugreek.

Seed, Mustard.

	Pounds.	Dollars.
1907	5,878,912	265,611
1908	4,995,830	215,319
1909	8,872,575	333,615
1910	9,124,305	372,443
1911	8,512,475	298,145

Seed, Poppy.

	Bushels.	Dollars.
1907	45,782	111,141
1908	55,775	174,274
1909	52,086	118,020
1910	44,203	101,291
1911	57,783	140,616

Seed, Rape.

	Pounds.	Dollars.
1907	3,561,348	124,272
1908	4,430,040	190,136
1909	3,320,651	115,054
1910	3,288,620	102,036
1911	3,039,349	96,768

Senna in Leaves.

	Pounds.	Dollars.
1907	1,774,806	70,974
1908	2,307,350	116,379
1909	2,159,553	99,856
1910	2,564,452	129,229
1911	3,063,275	143,846

Sheep Dip.

		Dollars.
1907	.....	18,913
1908	.....	7,554
1909	.....	2,575
1910	.....	20,440
1911	.....	18,582

Shellac.

	Pounds.	Dollars.
1907	17,786,055	5,821,688
1908	13,362,307	4,144,013
1909	19,189,251	3,891,157
1910	29,889,319	3,920,752
1911	15,917,906	2,352,313

Sienna, Ground in Oil and Water.

	Pounds.	Dollars.
1907	6,568	405
1908	9,529	564
1909	10,043	630
1910	7,780	534
1911	9,853	643

Silver Leaf.

	Packs of 100 leaves.	Dollars.
1907	1,515	804
1908	250	163
1909	140	86
1910	1,783	946
1911	28,240	3,220

Soap, Castile.

	Pounds.	Dollars.
1907	5,153,565	346,383
1908	4,152,095	304,275
1909	5,082,214	374,472
1910	5,129,734	395,426
1911	4,573,057	364,200

Soap, Toilet.

	Pounds.	Dollars.
1907	1,207,307	520,600
1908	976,267	410,648
1909	1,294,035	559,486
1910	596,486	248,196
1911	.....	380,471

Soap, All Other.

		Dollars.
1907	.....	93,311
1908	.....	53,217
1909	.....	57,034
1910	.....	118,043
1911	.....	68,806

Soda, Arsenate of.

	Pounds.	Dollars.
1907	168,509	9,306
1908	318,234	13,922
1909	250,719	7,108
1910	484,722	14,368
1911	168,442	5,199

Soda, Ash.

	Pounds.	Dollars.
1907	6,745,242	73,052
1908	3,958,760	41,607
1909	4,440,499	48,674
1910	4,990,027	55,262
1911	3,878,172	43,365

Soda, Bicarbonate of, Etc.

	Pounds.	Dollars.
1907	136,037	4,274
1908	85,344	2,555
1909	121,762	4,821
1910	146,459	4,472
1911	85,202	2,634

Soda, Bichromate and Chromate of.

	Pounds.	Dollars.
1907	6,969	425
1908	108,089	4,304
1909	2,412,032	97,661
1910	2,664,317	101,687
1911	11	1

Soda, Hydrate of, or Caustic.

	Pounds.	Dollars.
1907	1,284,778	39,396
1908	1,131,750	31,716
1909	781,971	24,742
1910	1,038,803	33,882
1911	2,984,280	73,968

Soda, Chlorate of.

	Pounds.	Dollars.
1907	1,284,778	39,396
1908	.....	.....
1909	150	12
1910	.....	.....
1911	55	2

Soda, Crystal Carbonate of.

	Pounds.	Dollars.
1907	127,732	2,626
1908	60,196	1,937
1909	168,363	3,464
1910	139,898	2,569
1911	305,144	4,235

Soda, Hyposulphite of.

	Pounds.	Dollars.
1907	70,792	1,093
1908	12,670	448
1909	11,456	312
1910	44,759	626
1911	29,537	612

Soda, Nitrate of.

	Tons.	Dollars.
1907	342,086	14,041,346
1908	329,605	12,547,611
1909	353,558	12,583,417
1910	542,334	16,548,036
1911	546,394	17,101,155

Soda, Nitrite of

	Pounds.	Dollars.
1907	757,835	37,623
1908	199,857	10,015
1909	152,393	7,258
1910	1,132,776	52,237
1911	477,707	21,205

Soda, Phosphate of

	Pounds.	Dollars.
1907	28,191	855
1908	25,381	619
1909	49,153	707
1910	62,193	1,045
1911	43,868	750

Soda, Prussiate of, Yellow.

	Pounds.	Dollars.
1907	2,148,882	175,674
1908	1,774,490	129,082
1909	1,962,068	123,880
1910	1,299,840	76,684
1911	1,196,661	66,971

Soda, Sal, or Soda Crystals, Not Concentrated.

	Pounds.	Dollars.
1907	760,042	4,771
1908	497,236	3,419
1909	503,136	3,231
1910	482,249	4,630
1911	214,419	11,713

Soda, Silicate of, or Other Alkaline Silicate.

	Pounds.	Dollars.
1907	1,235,716	11,461
1908	1,488,071	13,376
1909	1,018,243	8,578
1910	1,190,163	12,904
1911	1,234,721	11,713

Soda, Sulphide of.

	Pounds.	Dollars.
1907	1,446,379	20,988
1908	600,759	9,539
1909	533,679	7,764
1910	596,656	9,086
1911	456,054	6,279

Soda, Sulphite of

	Pounds.	Dollars.
1907	24,396	803
1908	116,964	3,259
1909	470,847	10,150
1910	251,074	4,082
1911	987,403	14,810

Sponges and Manufactures of.

		Dollars.
1907	.....	336,356
1908	.....	246,402
1909	.....	243,056
1910	.....	314,971
1911	.....	256,479

Starch.

	Pounds.	Dollars.
1907	6,423,831	156,853
1908	5,480,820	145,278
1909	16,903,029	395,203
1910	.....	290,893
1911	8,401,899	274,290

Stearin, Oleo.

	Pounds.	Dollars.
1907	1,162,303	109,852
1908	1,317,451	121,238
1909	4,104,098	419,359
1910	8,922,978	930,160
1911	5,708,462	501,072

Strontia, Oxide of.

		Dollars.
1907	.....	56
1908	.....	1,253
1909	.....	6
1910	.....	287
1911	.....	44

Strichnia or Strychnine and All Salts of.

	Ounces.	Dollars.
1907	769	338
1908	1,123	598
1909	1,475	714
1910	1,971	1,075
1911	145	144

Sulphur or Brimstone, Crude.

	Tons.	Dollars.
1907	35,486	638,856
1908	25,741	428,953
1909	17,897	307,207
1910	31,233	537,778
1911	23,380	409,990

Sulphur, Refined.

	Tons.	Dollars.
1907	739	18,080
1908	655	16,805
1909	751	19,964
1910	966	24,078
1911	999	24,072

Sulphur, Lac or Precipitated.

	Pounds.	Dollars.
1907	96,160	5,464
1908	91,770	5,784
1909	114,699	7,442
1910	110,886	6,672
1911	130,633	8,098

Sulphur Ore or Pyrites.

	Tons.	Dollars.
1907	627,708	2,504,720
1908	709,053	2,688,855
1909	661,712	2,462,154
1910	723,277	2,617,725
1911	893,487	3,108,090

Sulphur, Sublimed or Flowers of.

	Tons.	Dollars.
1907	1,457	41,501
1908	1,451	40,346
1909	426	13,035
1910	1,165	33,870
1911	969	27,296

Sumac, Ground.

	Pounds.	Dollars.
1907	12,244,907	259,974
1908	8,758,241	234,005
1909	10,976,485	291,562
1910	12,605,164	280,404
1911	11,571,708	215,298

Sumac, Extract.

	Pounds.	Dollars.
1907	1,537,420	55,701
1908	1,060,694	42,022
1909	1,232,836	54,171
1910	1,461,373	54,899
1911	987,348	36,025

Sumac, Unmanufactured.

	Pounds.	Dollars.
1907	3,775,726	83,189
1908	2,056,541	51,862
1909	558,109	20,617
1910	1,003,553	24,929
1911	3,063,275	143,846

Talc, Ground, Etc.

	Pounds.	Dollars.
1907	16,108,687	98,022
1908	18,894,220	117,032
1909	14,767,760	94,761
1910	18,477,655	116,886
1911	12,653,335	82,787

Tallow.

	Pounds.	Dollars.
1907	424,875	29,925
1908	304,765	23,074
1909	364,964	28,300
1910	911,472	68,482
1911	.....	.....

Tapioca, Tapioca Flour, Cassava, or Cassady.

	Pounds.	Dollars.
1907	43,647,731	1,271,350
1908	49,806,002	1,408,177
1909	56,363,629	1,164,201
1910	41,628,674	857,221
1911	60,915,112	1,396,198

Tar and Pitch of Wood.

	Barrels.	Dollars.
1907	1,130	6,928
1907	2,454	9,425
1909	897	4,789
1910	1,504	8,068
1911	1,759	10,448

Tartrate of Soda, or Potassa, or Rochelle Salts.

	Pounds.	Dollars.
1907	723	76
1908	1,722	256
1909	40,123	4,913
1910	37,876	4,328
1911	78,257	9,035

Terra Alba

	Pounds.	Dollars.
1907	73,672	588
1908	73,537	603
1909	.....	.....
1910	.....	.....
1911	11,200	61

Thorium, Nitrate of.

	Pounds.	Dollars.
1907	88,653	240,128
1908	42,546	131,582
1909	133,752	270,917
1910	98,813	159,499
1911	118,201	237,212

Tin, Oxide of (Black).

	Pounds.	Dollars.
1908	21,667	3,054
1909	.....	.....
1910	112,114	13,091
1911	76,558	8,920

Tonka Beans.

	Pounds.	Dollars.
1907	.....	166,102
1908	25,635	10,519
1909	442,576	216,887
1910	264,008	175,8
1911	23,218	27,616

Turmeric.

		Dollars.
1907	.....	26,253
1908	.....	31,531
1909	.....	31,336
1910	.....	28,077
1911	.....	41,609

Turpentine, Spirits of.

	Gallons.	Dollars.
1907	32,796	14,469
1908	141,825	33,748
1909	50,767	17,538
1910	127,202	54,330
1911	204,821	108,278

Turpentine, Venice.

	Pounds.	Dollars.
1907	150,344	14,817
1908	78,563	8,556
1909	61,342	6,345
1910	111,565	15,904
1911	112,053	20,702

Ultramarine, Dry, in Pulp or Mixed with Water.

	Pounds.	Dollars.
1907	715,294	66,753
1908	625,770	60,272
1909	731,469	63,074
1910	709,726	66,201
1911	685,933	63,817

Umber, Crude and Pulverized, Washed or Pulverized.

	Pounds.	Dollars.
1907	2,448,226	20,082
1908	3,652,089	27,843
1909	2,675,061	22,910
1910	4,081,564	31,700
1911	2,557,313	13,265

Umber, Ground in Oil or Water.

	Pounds.	Dollars.
1907	6,128	464
1908	9,526	496
1909	10,734	566
1910	7,687	420
1911	6,789	444

Uranium, Oxide and Salts of

		Dollars.
1907	.....	14,656
1908	.....	6,789
1909	.....	9,628
1910	.....	8,402
1911	.....	12,651

Vaccine Virus.

		Dollars.
1907	.....	5,734
1908	.....	5,712
1909	.....	15,110
1910	.....	5,813
1911	.....	11,398

Valonia.

		Dollars.
1907	.....	3,881
1908	.....	6,850
1909	.....	22,019
1910	.....	122,319
1911	.....	207,088

Vanilla Beans.

	Pounds.	Dollars.
1907	969,031	1,523,156
1908	572,537	1,170,199
1909	1,121,575	1,495,469
1910	796,589	1,203,773
1911	1,140,640	1,953,328

Vanillin.

	Ounces.	Dollars.
1907	100	25
1908	1,764	396
1909	361	80
1910	4,080	948
1911	140	34

Varnish, Spirit.

	Gallons.	Dollars.
1907	2,703	5,154
1908	1,022	2,884
1909	3,044	5,177
1910	10,261	12,603
1911	7,319	9,691

Varnish, Other (Including Gold Size or Japan).

	Gallons.	Dollars.
1907	28,801	64,145
1908	22,353	47,749
1909	25,484	51,133
1910	27,680	53,520
1911	28,641	52,284

Venetian Red.

	Pounds.	Dollars.
1907	4,930,609	37,068
1908	3,777,213	31,177
1909	4,030,846	28,560
1910	2,913,586	26,314
1911	2,350,303	25,242

Verdigris, or Sub-Acetate of Copper.

	Pounds.	Dollars.
1907	39,462	6,078
1908	49,346	6,995
1909	63,709	8,509
1910	172,652	10,604
1911	86,010	6,608

Vermilion.

	Pounds.	Dollars.
1907	180,580	74,979
1908	140,940	60,979
1909	81,292	41,590
1910	70,606	35,796
1911	96,141	10,040

Wash Blue Containing Ultramarine.

	Pounds.	Dollars.
1907	173,190	23,623
1908	81,756	10,413
1909	77,015	10,886
1910	112,945	14,722
1911	129,800	13,786

Wax, Vegetable and Mineral.

	Pounds.	Dollars.
1906	8,336,847	1,465,064
1907	8,559,135	1,461,380

Wax, Vegetable.

	Pounds.	Dollars.
1908	3,701,156	689,637
1909	4,088,100	624,352
1910	5,269,576	823,293
1911	4,188,179	836,021

Wax, Mineral.

	Pounds.	Dollars.
1908	2,669,711	286,459
1909	4,829,898	485,301
1910	8,157,226	585,994
1911	5,809,416	481,744

Whalebone.

	Pounds.	Dollars.
1907	13,614	55,297
1908	9,154	43,642
1909	14,295	64,653
1910	.....	26,523
1911	31,024	91,561

White Lead.

	Pounds.	Dollars.
1907	617,507	38,481
1908	513,099	31,603
1909	667,417	37,493
1910	728,431	40,804
1911	659,915	38,878

Whiting and Paris White, Dry.

	Pounds.	Dollars.
1907	1,858,339	13,219
1908	2,390,063	11,467
1909	2,089,981	13,540
1910	2,868,239	16,305
1911	4,656,958	18,758

Zinc, Chloride of.

	Pounds.	Dollars.
1907	1,399,517	38,236
1908	1,172,134	34,107
1909	1,348,678	35,302
1910	1,201,440	31,644
1911	1,311,185	34,978

Zinc, Oxide, Dry.

	Pounds.	Dollars.
1907	4,807,065	289,285
1908	4,703,262	278,456
1909	5,602,259	311,583
1910	6,626,902	379,445
1911	5,262,770	331,337

Zinc Sulphate.

	Pounds.	Dollars.
1909	38,406	1,129
1910	55,923	1,709
1911	45,423	2,042

DOMESTIC EXPORTS FROM THE UNITED STATES.

[Years ended June 30.]

Acid.

		Dollars.
1907	.....	367,682
1908	.....	328,034
1909	.....	382,564
1910	.....	466,375
1911	.....	380,437

Alcohol, Wood

	Proof gallons.	Dollars.
1907	2,150,311	862,819
1908	1,958,630	819,753
1909	1,100,495	383,788
1910	1,328,601	581,820
1911	1,962,336	881,991

Alcohol—All Other (Including Pure, Neutral or Cologne Spirits).

	Proof gallons.	Dollars.
1907	428,107	70,814
1908	235,752	53,793
1909	103,932	36,719
1910	231,077	64,393
1911	35,231	19,820

Antimony.

		Dollars.
1907	.....	9,832
1908	.....	1,186
1909	.....	.....
1910	.....	.....
1911	.....	.....

Ashes, Pot and Pearl.

	Pounds.	Dollars.
1907	1,379,611	83,350
1908	987,193	59,588
1909	699,443	38,365
1910	.....	.....
1911	.....	.....

Asphaltum and Manufactures of

		Dollars.
1907	.....	374,476
1908	.....	451,968
1909	.....	425,429
1910	.....	702,520
1911	.....	868,552

Bark, Extract of, for Tanning.

		Dollars.
1907	.....	305,998
1908	.....	241,608
1909	.....	260,965
1910	.....	388,448
1911	.....	336,600

Beeswax.

	Pounds.	Dollars.
1907	117,169	36,392
1908	90,506	28,659
1909	77,547	23,293
1910	89,890	27,740
1911	101,735	31,404

Baking Powder.

	Pounds.	Dollars.
1907	1,736,692	558,357
1908	1,716,303	556,852
1909	1,815,268	600,957
1910	1,754,914	529,062
1911	2,187,727	631,690

Bristles.

		Dollars.
1907	.....	2,732
1908	.....	410
1909	.....	6,543
1910	.....	.....
1911	.....	.....

Candles.

	Pounds.	Dollars.
1907	5,203,736	473,235
1908	3,694,860	363,854
1909	3,694,319	353,098
1910	3,215,882	294,578
1911	3,194,492	291,417

Carbon Black and Lamp Black.

		Dollars.
1907	.....	453,015
1908	.....	493,907
1909	.....	514,951
1910	.....	679,607
1911	.....	640,911

Chalk, Crayons, Etc.

		Dollars.
1907	.....	69,178
1908	.....	103,429
1909	.....	99,095
1910	.....	110,647
1911	.....	122,490

Chewing Gum.

		Dollars
1907	.....	25,223
1908	.....	24,131
1909	.....	42,806
1910	.....	53,483
1911	.....	89,129

Coal Tar.

	Barrels.	Dollars.
1907	54,418	99,308
1908	96,432	166,881
1909	99,003	136,721
1910	110,523	138,854
1911	90,829	121,375

Cork, Manufactures of.

		Dollars
1907	.....	119,963
1908	.....	179,987
1909	.....	150,308
1910	.....	157,046
1911	.....	168,267

Copper, Sulphate of.

	Pounds.	Dollars.
1907	7,002,220	425,910
1908	7,849,502	408,057
1909	3,063,504	132,929
1910	4,431,425	788,464
1911*	6,218,042	269,684

* Figures for 1911 are for six months only, January to June, inclusive.

Dyes and Dyestuffs.

		Dollars.
1907	.....	486,608
1908	.....	437,950
1909	.....	380,884
1910	.....	380,203
1911	.....	325,519

Egg Yolks, Canned Eggs, Etc.

		Dollars.
1907	.....	11,565
1908	.....	9,024
1909	.....	23,938
1910	.....	3,585
1911	.....	5,353

Fertilizers, Phosphates, Crude.

	Tons.	Dollars.
1907	900,983	7,363,364
1908	1,180,280	9,407,961
1909	1,067,935	8,105,784
1910	981,095	7,454,604
1911	1,208,340	9,068,839

Fertilizers, All Other.

	Tons.	Dollars.
1907	35,621	1,233,347
1908	42,671	1,562,976
1909	37,432	1,177,632
1910	39,492	1,245,946
1911	54,251	1,652,293

Ginseng.

	Pounds.	Dollars.
1907	117,696	813,023
1908	154,180	1,111,994
1909	186,257	1,270,179
1910	192,406	1,439,434
1911	153,999	1,088,202

Glass, Plate.

(Not classified previous to 1908.)

	Square feet.	Dollars.
1908	72,309	23,678
1909	47,228	17,834
1910	37,799	15,016
1911*	88,506	29,683

* Figures for 1911 are for six months only, January to June, inclusive.

Glass, Window.

		Dollars.
1907	.....	95,388
1908	.....	107,596
1909	.....	39,427
1910	.....	67,965
1911*	.....	121,339

* Figures for 1911 are for six months only, January to June, inclusive.

Glass, All Other.

		Dollars.
1907	.....	2,509,329
1908	.....	2,374,143
1909	.....	2,095,932
1910	.....	2,722,390
1911	.....	3,095,369

Glucose or Grape Sugar.

	Pounds.	Dollars.
1907	151,629,441	3,481,715
1908	.....	.....
1909	.....	.....
1910	.....	.....
1911	.....	.....

Glucose.

(Not separately classified previous to 1908.)

	Pounds.	Dollars.
1908	96,608,192	1,808,652
1909	92,652,409	1,938,406
1910	112,736,639	2,623,131
1911	137,461,782	2,596,220

Glue.

	Pounds.	Dollars.
1907	3,481,715	31,998
1908	2,917,172	289,441
1909	2,340,426	244,751
1910	2,488,205	261,756
1911	2,307,966	242,755

Goldbeaters' Skins.

		Dollars.
1907	.....	.....
1908	.....	75
1909	.....	.....
1910	.....	.....
1911	.....	.....

Graphite and Manufactures of

		Dollars.
1907	.....	266,055
1908	.....	251,283
1909	.....	293,716
1910	.....	302,568
1911	.....	407,423

Grease and Soap Stock.

		Dollars.
1907	.....	5,473,623
1908	.....	5,762,709
1909	.....	4,814,901
1910	.....	4,612,426
1911	.....	5,177,581

Honey.

		Dollars.
1907	.....	63,690
1908	.....	78,102
1909	.....	85,578
1910	.....	159,401
1911	.....	81,645

Hops.

	Pounds.	Dollars.
1907	16,809,534	3,531,972
1908	22,920,480	2,963,167
1909	10,446,884	1,271,629
1910	10,589,254	2,062,140
1911	13,104,774	2,130,972

Iron, Pig.

	Tons.	Dollars.
1907	85,000	1,634,923
1908	52,518	1,028,567
1909	50,178	816,532
1910	79,771	1,353,589
1911	152,807	2,475,696

Lard.

	Pounds.	Dollars.
1907	627,559,660	57,497,980
1908	603,413,770	54,789,748
1909	328,722,933	52,712,569
1910	362,927,671	43,301,156
1911	476,107,857	52,509,217

Lard Compounds and Substitutes for (Cottolene, Lardine, Etc.).

	Pounds.	Dollars.
1907	89,148,861	6,166,910
1908	75,183,210	6,035,418
1909	75,183,196	6,115,307
1910	74,556,603	6,887,738
1911	73,754,400	7,070,967

Lead, Pigs, Bars and Old.

	Pounds.	Dollars.
1907	181,696	11,054
1908	74,900	4,947
1909	.....	.....
1910	.....	.....
1911	.....	.....

Lime, Acetate.

	Pounds.	Dollars.
1907	86,243,981	2,418,736
1908	61,040,936	1,543,440
1909	66,552,063	1,096,401
1910	63,087,429	1,423,337
1911	70,191,256	1,606,979

Medicines, Patent or Proprietary.

		Dollars.
1907	.....	5,834,850
1908	.....	6,475,713
1909	.....	5,833,883
1910	.....	5,848,449
1911	.....	6,783,020

Mucilage.

		Dollars.
1907	.....	21,519
1908	.....	22,239
1909	.....	24,695
1910	.....	22,037
1911	.....	24,127

Oils, Animal, Not Otherwise Specified.

	Gallons.	Dollars.
1907	503,234	292,381
1908	621,360	341,304
1909	614,383	345,838
1910	535,875	401,460
1911	1,019,478	681,096

Oil Cake, Corn.

	Pounds.	Dollars.
1907	56,808,972	677,156
1908	66,127,704	801,707
1909	53,233,890	727,355
1910	49,108,598	689,633
1911	83,384,870	1,115,986

Oil Cake, Cottonseed.

	Pounds.	Dollars.
1907	1,340,967,136	17,062,594
1908	929,287,467	11,880,415
1909	1,233,750,327	15,805,433
1910	640,088,766	9,071,815
1911	804,596,955	10,153,475

Oil Cake, Linseed.

	Pounds.	Dollars.
1907	665,936,164	8,675,877
1908	696,135,362	9,175,559
1909	682,764,545	9,303,346
1910	652,316,916	9,489,564
1911	559,674,653	8,361,666

Oil, Corn.

	Gallons.	Dollars.
1907	3,041,269	1,083,129
1908	3,059,330	1,456,120
1909	1,258,889	1,293,580
1910	*11,299,332	643,392
1911	*25,316,799	1,573,605

* Pounds.

Oil, Cottonseed.

	Gallons.	Dollars.
1907	41,880,304	17,074,403
1908	41,019,991	17,226,451
1909	51,087,329	20,851,380
1910	*223,955,002	14,798,063
1911	225,520,944	17,127,369

* Pounds.

Oil, Fish (Except Whale).

	Gallons.	Dollars.
1907	940,151	212,325
1908	306,439	93,261
1909	327,115	78,121
1910	1,529,696	370,300
1911*	42,058	17,040

* Figures for 1911 are for six months only, January to June, inclusive.

Oil, Illuminating.

	Gallons.	Dollars.
1907	894,529,432	56,249,991
1908	1,041,725,991	70,809,415
1909	1,080,542,456	71,329,901
1910	1,005,027,536	62,477,527
1911	1,022,311,042	57,476,494

Oil, Lard.

	Gallons.	Dollars.
1907	234,730	144,063
1908	259,062	169,625
1909	234,626	467,644
1910	151,142	131,241
1911*	120,094	90,724

* Figures for 1911 are for six months only, January to June, inclusive.

Oil, Linseed.

	Gallons.	Dollars.
1907	450,208	203,712
1908	367,883	172,083
1909	273,629	140,876
1910	228,426	155,858
1911	175,210	164,879

Oil, Lubricating and Heavy Paraffine.

	Gallons.	Dollars.
1907	136,140,226	17,179,562
1908	159,763,900	20,370,613
1909	144,254,271	18,307,342
1910	170,430,277	20,891,473
1911	173,642,495	22,061,190

Oils, Mineral, Naphtha, Including All Light Products of Distillation.

	Gallons.	Dollars.
1907	26,357,054	2,735,598
1908	36,242,370	4,003,827
1909	63,831,267	5,805,482
1910	77,650,923	6,302,418
1911	111,998,260	9,479,394

Oil, Peppermint.

	Pounds.	Dollars.
1907	147,722	499,082
1908	141,617	357,555
1909	161,811	288,318
1910	110,407	215,845
1911	123,420	269,034

Oils, Vegetable, All Other Fixed or Expressed.

		Dollars.
1907	.....	430,965
1908	.....	296,993
1909	.....	249,300
1910	.....	343,509
1911	.....	292,757

Oils, Volatile, All Other.

		Dollars.
1907	.....	258,423
1908	.....	214,765
1909	.....	278,536
1910	.....	322,634
1911	.....	377,588

Oil, Whale.

	Gallons.	Dollars.
1907	9,011	6,492
1908	18,507	8,146
1909	.....	.....
1910	.....	.....
1911	.....	.....

Oleomargarine.

	Pounds.	Dollars.
1907	5,397,609	529,406
1908	2,938,175	299,746
1909	2,889,058	293,635
1910	3,418,632	349,972
1911	3,794,939	408,459

Oleo Oil.*

	Pounds.	Dollars.
1907	195,337,176	16,819,933
1908	212,541,157	19,278,476
1909	179,985,246	19,126,741
1910	126,091,675	14,305,080
1911	138,696,906	13,658,762

* Includes "neutral lard" prior to 1911.

Paints Not Elsewhere Specified.

		Dollars.
1907	.....	2,481,894
1908	.....	2,457,469
1909	.....	2,512,460
1910	.....	3,090,498
1911	.....	3,604,384

Paraffine and Paraffine Wax.

	Pounds.	Dollars.
1907	185,511,773	9,030,992
1908	178,709,678	8,740,929
1909	137,403,569	6,445,917
1910	166,982,570	7,896,359
1911	218,592,330	7,378,736

Perfumery and Cosmetics.

		Dollars.
1907	.....	604,822
1908	.....	629,230
1909	.....	683,263
1910	.....	824,469
1911	.....	1,009,359

Platinum and Manufactures of

		Dollars.
1907	.....	51,499
1908	.....	17,791
1909	.....	14,168
1910	.....	43,373
1911	.....	105,298

Quicksilver.

	Pounds.	Dollars.
1907	496,390	243,647
1908	210,821	119,761
1909	286,518	153,566
1910	467,434	256,084
1911	34,005	20,610

Residuum, Including Tar and All Other from Which Light Bodies Have Been Distilled.

	Gallons.	Dollars.
1907	65,228,009	2,063,668
1908	70,581,822	2,467,471
1909	103,188,033	3,649,387
1910	124,055,263	4,141,613
1911	123,398,188	3,680,925

Roots, Herbs, Etc., Not Elsewhere Specified.

		Dollars.
1907	.....	413,799
1908	.....	435,041
1909	.....	395,801
1910	.....	476,837
1911	.....	563,862

Rosins.

	Barrels.	Dollars.
1907	2,560,966	11,327,091
1908	2,712,732	11,395,126
1909	2,170,177	8,004,838
1910	2,144,318	9,753,488
1911	2,189,607	14,067,335

Salt.

	Pounds.	Dollars.
1907	64,053,083	235,582
1908	52,106,865	199,852
1909	66,474,294	237,973
1910	83,816,808	286,363
1911	102,032,616	329,255

Seed, Cotton.

	Pounds.	Dollars.
1907	17,028,111	209,493
1908	24,478,473	353,213
1909	51,626,741	632,561
1910	24,931,099	406,120
1911	13,224,347	209,944

Seed, Flax.

	Bushels.	Dollars.
1907	6,336,319	7,990,383
1908	4,277,313	5,721,337
1909	882,899	1,092,539
1910	65,193	118,329
1911	976	2,520

Soap, Toilet.

		Dollars.
1907	.....	1,144,879
1908	.....	1,241,953
1909	.....	1,130,723
1910	.....	1,479,870
1911	.....	1,741,971

Soap, All Other.

	Pounds.	Dollars.
1907	65,183,460	2,661,218
1908	51,108,178	2,165,267
1909	53,150,427	2,341,708
1910	45,716,414	2,140,676
1911	47,581,259	2,306,010

Spermaceti and Spermaceti Wax.

	Pounds.	Dollars.
1907	173,985	50,801
1908	115,136	34,585
1909	57,605	16,684
1910	51,539	13,866
1911	37,002	9,700

Spices.

		Dollars.
1907	.....	50,111
1908	.....	43,587
1909	.....	38,444
1910	.....	52,755
1911	.....	58,989

Spirits of Turpentine.

	Gallons.	Dollars.
1907	15,854,676	10,241,883
1908	19,532,583	10,146,151
1909	17,502,028	7,018,058
1910	15,587,737	8,780,236
1911	14,817,751	10,768,202

Sponges.

	Pounds.	Dollars.
1907	136,301	114,354
1908	247,518	168,426
1909	248,893	195,427
1910	260,054	225,138
1911	217,313	209,311

Starch.

	Pounds.	Dollars.
1907	51,334,580	1,126,465
1908	48,125,851	1,142,054
1909	33,228,278	780,155
1910	51,535,570	1,274,773
1911	158,239,178	3,137,552

Sugar, Grape.

(Not separately classified previous to 1908.)

	Pounds.	Dollars.
1908	31,078,642	641,988
1909	19,572,095	407,683
1910	37,089,449	792,089
1911	44,501,264	799,163

Sulphur or Brimstone, Crude.

	Tons.	Dollars.
1907	18,077	367,230
1908	38,522	785,335
1909	31,525	630,527
1910	45,595	864,808
1911	17,269	326,735

Tallow.

	Pounds.	Dollars.
1907	127,857,739	7,182,688
1908	91,397,507	5,399,219
1909	53,332,767	3,000,366
1910	29,379,992	1,779,615
1911	29,813,154	1,993,681

Tripoli.

		Dollars.
1907	.....	39,769
1908	.....	35,124
1909	.....	35,730
1910	.....	53,145
1911	.....	49,358

Tar, Turpentine and Pitch.

(Includes turpentine and pitch—tar, turpentine and pitch after 1909.)

	Gallons.	Dollars.
1907	36,622	117,778
1908	28,139	100,322
1909	21,106	78,251
1910	40,037	148,238
1911	40,380	187,183

Varnish.

	Gallons.	Dollars.
1907	916,848	961,291
1908	913,704	940,699
1909	838,007	821,027
1910	1,017,284	976,278
1911	1,074,264	1,050,290

Whalebone.

	Pounds.	Dollars
1907	85,868	368,543
1908	53,167	210,444
1909	67,331	233,692
1910	89,768	296,572
1911	82,557	251,386

Zinc Dross.

	Pounds.	Dollars.
1907	31,206,336	1,028,302
1908	18,171,461	480,907
1909	15,560,277	500,518
1910	9,182,593	347,747
1911	8,674,999	348,955

Zinc Ore.

	Tons.	Dollars.
1907	18,711	586,870
1908	22,785	803,060
1909	15,707	598,625
1910	15,022	533,750
1911	15,211	600,853

Zinc, Oxide of

	Pounds.	Dollars.
1907	26,179,994	996,980
1908	27,266,671	1,050,448
1909	26,955,997	931,609
1910	27,149,378	956,460
1911	27,866,979	999,161

Boll Weevil Area Stationary.

DISAPPEARANCE IN WESTERN TEXAS OFFSET BY SPREAD AROUND THE MISSISSIPPI VALLEY.

Infected areas in the boll weevil portion of the cotton belt were practically no larger for 1911 than during the preceding year. In the west and northwest of Texas the pest disappeared from about as large a territory as its encroachments embraced in the advance in the East. The farthest eastern limit embraces the northwestern corner of Florida and the southwestern sixth of Alabama. The northern limit east of the Mississippi is at the point where the southern border of Tennessee reaches the river. A greater part of Arkansas is infected. Changes in methods of cultivation, and, in some cases, suspension of cotton planting for other crops were the chief influences in eliminating weevil from the western district.

CALCUTTA INDIGO MARKET.

The only important indigo producing district is Behar. Here cultivation remains fairly unchanged, and is in the region of 1,000,000 acres. The weather favored the sowings, and continued favorable to the growing crop, and first cuttings were successful. Second cuttings, however, proved a total failure, owing to the leaf being attacked by disease, and the crop proved short of what was originally expected by 5,000@6,000 maunds. The total output now amounts to some 24,000, or 6,000 chests from all sources.

The quality is excellent, there being a large portion of fine and middling grades and a very small proportion of poor.

At the present time the market is very slow, as owing to the disturbed state of Persia, the Eastern buyers who of late years have taken up 50 per cent. of the crops, are buying very sparingly.

BARYTES.

The use of barytes in the several industries is on the increase with the principal demand coming from the paint and rubber trades and also a good buying movement from the glass industry. Business has been largely done on contract orders, though supplemented at times by free jobbing demand. Dry color manufacturers were active buyers early in the year, and good quantities were consumed in this branch of the paint trade, as well as by paint grinders. Prices were unchanged during the year, and quotations are $18.50@22.50 per ton for foreign prime white, $16@17 per ton for domestic prime white, $12@13 per ton for off grades. Figures of domestic production are placed at a 10 per cent. increase over those of 1910, but no official figures are available. Production of domestic barytes from 1901 to 1910, inclusive, was as follows:—

	Short tons.		Short tons.
1901	49,070	1906	50,231
1902	61,668	1907	89,621
1903	50,397	1908	38,527
1904	65,727	1909	61,945
1905	48,235	1910	42,975

CHALK.

A very slow movement was recorded for chalk in the first half of 1911, but in the latter half of the year whiting manufacturers took on large stocks, and the year closed showing an improvement in consumption over that of 1910. At the beginning of the year $2.80 per ton was quoted for English and $3 per ton for French, but these figures were changed in February at quotations that were $2.75 for English and $3.05 for French. Towards the close of the year a greater range in prices was quoted, a lower rate being given for large buyers and higher freight charges causing high outside figures. Quotations then read $2.70@2.85 for English and $3@3.10 for French. The market was void of special features and developments were along routine lines.

CHINA CLAY.

Early in the year contracts were placed covering delivery over 1911, and these orders were drawn on from time to time, and in this way the bulk of offerings entered into consuming channels. Business was about equal to that of 1910, judging from the import figures of the United States Government. In 1911, 228,864 tons were imported, and in 1910 108,855 tons were imported from July 1, so that in the latter six months of the two years imports of china clay were about the same. Prices for this commodity do not change frequently, and for the year under review $11.50@18 was quoted for foreign and $8@9 for domestic. Demand for china clay was distributed among several industries, among whom may be mentioned the paint, pottery, textile and paper trades.

Now Makers of Cream of Tartar and Tartaric Acid.

The Harshaw, Fuller & Goodwin Company, of Cleveland, O., are now manufacturing cream of tartar and tartaric acid. J. A. McGean, who was formerly president of the American Linseed Company, has charge of that branch of their business. In an announcement to the trade, they state:

We are pleased to announce that we have added to our Elyria works a department for the manufacture of cream of tartar and tartaric acid, and will be ready to begin shipments of these products early in February.

Our plant was designed and built after a most careful study of the different methods for the production of these articles, and we believe it to be the most modern and best equipped in the world. Its operation is under the direction of Mr. Elisee Fabre, who for fifteen years was superintendent of a factory in France, the largest in Europe, and who was personally awarded the gold medal at the Franco-British Exposition, held in London in 1908, for both cream of tartar and tartaric acid.

Our cream of tartar and tartaric acid is the purest that it is possible to produce and is unequaled by any made in this country.

The general management of the business is under the direction of Mr. J. A. McGean, formerly president of the American Linseed Company, who recently became identified with our Company.

(Special to Oil, Paint and Drug Reporter.)

Production of Spelter in 1911.

Washington, Feb. 23, 1912.

The United States Geological Survey has just issued its annual advance statement of spelter production for 1911. This statement, prepared by C. E. Siebenthal, gives the final figures of output as made up from the smelter reports and is not subject to change unless an error is discovered in those reports. Preliminary estimates of the production of zinc, copper, lead and some other metals in 1911 were published by the Survey January 2. These preliminary figures for spelter are shown by comparison with the final figures to have been in excess about 0.5 per cent. of the total production.

The zinc ore mined in the United States is treated in three ways, being smelted to spelter (metallic zinc), converted into zinc oxide pigment or exported from the country in the form of ore. The figures of spelter production therefore do not represent the complete zinc output of the different States. Missouri had, as usual, the largest output, though considerably less than in 1910, the yield being 127,540 short tons, compared with 140,652 tons in 1910 and practically the same in 1909. The States making the principal gains were California, which made its first important zinc output; Colorado, which nearly doubled its 1910 spelter output; Montana, which also nearly doubled its output; and Illinois and Wisconsin, both of which made good gains. The total for these five States was 100,000 tons, compared with about 57,000 tons in 1910. Colorado ranked second in output of spelter, with Wisconsin and Montana following. If the exports of zinc ore and the zinc in pigments made from ore from the Franklin Furnace mine of New Jersey are taken into account, that State no doubt, as usual, ranked second in the production of zinc.

The production of spelter in the United States in 1911 from domestic ores was 271,621 short tons and from foreign ores 14,905 tons, a ttotal of 286,526 tons, compared to 252 479 tons, 16,705 tons and 269,184 tons, respectively, in 1910, a gain of 17,342 tons, or 6.4 per cent. The world's output of spelter in 1911 was 974,385 tons, compared with 883,419 tons in 1910, a gain of 90,966 tons, or 10.3 per cent., showing that the United States did not make its quota of the world's gain. This country's share of the world's production in 1911 was 29.4 per cent., compared to 30.5 per cent. in 1910 and 30.1 per cent. in 1909.

Other tables given by Mr. Siebenthal show the production of secondary spelter from drosses, skimmings and old metal, the consumption of spelter and the imports and exports of ore, drosses and spelter. The imports of zinc ore showed a loss of about 25 per cent. in zinc content compared with 1910. In all these tables, as well as those of spelter production, the figures are given for each year from 1906 to 1911 inclusive, in order that a fairly extended comparison may be possible.

A diagram covering the period from 1906 to 1911 inclusive shows by surves the average weekly price of spelter at St. Louis and at London, the average weekly base price of concentrates at Joplin and the average weekly sales of zinc concentrates in the Joplin region. These curves show graphically the mutual relation of the London and St. Louis prices of spelter and their relation to the price of concentrates in the Joplin region and to the production of that region.

A table of the zinc-smelting capacity of the country, with contemplated additions thereto for 1912, shows well the drift of current zinc smelter construction from the failing gas fields of Kansas to the coal fields o fIllinois and the gas fields of Oklahoma. Illinois, with 21,544 retorts at the close of the year, will add 8,276 retorts in 1912. Oklahoma, with 15,620 retorts in 1911, will add 3,840 more in 1912. Kansas, with 31,378 retorts at the close of the year, plans no additional retorts and will probably in 1912 demolish some of the smelters not now actively operated. In Pennsylvania 2,880 retorts will be added in 1912, and 3,456 retorts were added in West Virginia in 1911. The total number of retorts at the close of 1911 was 85,018, to be compared with 94,328 retorts at the close of 1910. A total of 14,996 new retorts is planned for 1912.

(Special to Oil, Paint and Drug Reporter.)

Natural Gas Industry.

Washington, Feb. 16, 1912.

The United States Geological Survey today makes a public monograph reviewing the natural gas industry of the United States by B. Hill for the Survey. An introductory is prepared for this review by Dr. David T. Day, whose reports on oil and other subjects for the Survey always constitute matters of great interest to the trade.

The total value of natural gas in the United States during 1910 is given at $70,750,158, of which the largest production is given for West Virginia, $23,816,553; for Pennsylvania, $21,657,211; Kansas, with about $8,000,000, and Oklahoma, with $5,500,000 constitute the remaining States of large production in the country. The following table gives the total value of the natural gas produced in the United States since and including 1890:—

1889	$21,107,099	1900	$23,698,674
1890	18,793,725	1901	27,066,077
1891	15,500,084	1902	30,867,863
1892	14,870,714	1903	35,807,860
1893	14,346,250	1904	38,496,700
1894	13,954,400	1905	41,562,855
1895	13,006,650	1906	46,873,932
1896	13,002,512	1907	54,222,390
1897	13,826,422	1908	54,040,374
1898	15,296 813	1909	63,206,941
1899	20,074,873	1910	70,756,158

In 1889 the production was principally in Pennsylvania, Ohio and Indiana. It was not until 1898 that West Virginia reached the million dollar mark. Kansas became important in 1903, and Oklahoma in 1908.

The above statistics take account only of the gas which was actually used. Thus the production includes, besides gas burned for light and fuel, the quantity consumed in extracting gasoline and in making carbon black (lampblack), but does not include any estimate of the quantity wasted by using the gas pressure in place of steam in steam engines, a practice prohibited by law in most States. An estimate is included of the gas used by gas engines in pumping and drilling oil wells and in operating pumps for compressing natural gas.

(Special to Oil, Paint and Drug Reporter.)

Coke Oven Tars for Road Making.

Washington, Feb. 16, 1912.

An elaborate report has just been made by Prevost Hubbard, chemist in the office of Public Roads, Department of Agriculture, regarding the coke-oven tars of the United States. The publication is intended to give the results of examinations made of all the coke-oven tars manufactured in the country, together with a discussion of their properties in relation to their uses as road materials. Among other things this report says:—

The rapidly increasing use in this country of refined coal tar in the treatment and construction of roads and the fact that an immense quantity of coal tar will ultimately become available for this purpose through the installation of by-product coke ovens make it highly desirable to obtain accurate information as to the properties of coke-oven tars which are being produced at present.

A complete description is given of the data collected by Mr. Hubbard in this report, including elaborate tables of analysis of crude coke-oven tars produced in this country and Canada, covering many different plants.

(Special to Oil, Paint and Drug Reporter.)

Possible New Oil Field in California.

Washington, Feb. 16, 1912.

A brief account of the new possible oil field in the southern end of San Joaquin Valley, California, is given in a bulletin just issued by the United States Geological Survey, giving the result of the investigation into that field by Robert Anderson, as an advance chapter from bulletin 471. This report says:—

The vast stores of petroleum discovered in the rocks along the foothills of the Tamblor Range on the southwest side of the San Joaquin Valley and in the foothills of the Sierra Nevada, near Barkersfield, on the northeast side, have suggested the possibility of oil occurring in the continuation of this foothill belt, around the south end of the valley between these two productive districts. Very little attention has been given to the geology of this immediate region and no tests of its oil possibilities have been made. With a view to obtaining a general idea of the geologic features and the possible oil resources, Mr. Anderson made a reconnaissance around the south end of the valley during the early part of October, 1910.

The main conclusion derived from this brief field examination is that a continuous productive area joining the present developed fields on the two sides of the valley is by no means to be expected, but that two or more areas situated near the border of the foothills at the south end of the valley offer favorable conditions for the accumulation of oil. Across the level San Joaquin Valley from Bakersfield to Buena Vista Lake, to the San Emigdio region, and to the Tejon region, even though it is likely that the oil-bearing rocks underlie the valley, every indication is that they are too deep to be accessible by present methods of drilling.

Around the foothill belt that fringes the valley the possible oil-bearing formations are not continuous and the structural conditions are not uniform, so that if oil is to be found at all it must be sought in areas where the presence of oil-bearing strata and the occurrence of favorable geologic structure make the accumulation of oil possible. One such area containing peculiarly favorable conditions is to be found in Wheeler Ridge, which extends into the valley east of Pleito Creek. Another promising area lies farther west, along the edge of the valley north of the mouths of Muddy and Santiago Creeks and northwest of the mouth of San Emigdio Creek. The latter area bids fair to form an eastward extension of the Sunset field, but it does not appear likely to be continuous with the prospective Wheeler Ridge field mentioned above.

These areas, as well as other parts of the region, are briefly described in the report. It is further stated that when studied in detail, areas other than those just mentioned may prove to have steatigraphic and structural conditions favorable for the accumulation of oil.

INDEX TO CONTENTS.

Editorial 3
Animal and Fish Oils 25
Barytes 78
Brimstone, Italian 13
Canary Seed, Rotterdam 48
Caraway Seed, Rotterdam 48
Chalk 78
China Clay 78
Chemical Market 9
China Wood Oil 51
" " London Market 13
Cinchona Bark, Foreign Review 47
" " Antwerp Statistics 48
Codliver Oil, Newfoundland 48
" " Norwegian 48
Cloves 49
Drug Market, New York 36
" " Crude, Domestic 44
" " Leipzig 46
" " London 44
Dyestuffs, New York Market 13
Essential Oils, Amsterdam Market 47
" " London Market 45
Federal Relations with the Trades 3
Fertilizer Market 51
" " Baltimore 53
" " Chicago 54
" " Philadelphia 54
Flaxseed, Northwestern Markets 29
Glycerine, English Market 46
Indigo, Calcutta 78
Lard, Tallow, Stearines and Greases 19
" " " " Chicago 21
Linseed Oil, New York Market 27
" " Western Market 29
" " London Market 29
Linseed Cake, Holland 34
Naval Stores, New York Market 34
" " Savannah Market 34
" " London Market 35
" " Bordeaux Market 36
Necrology 69
Opium, Turkish Market 46
" Constantinople Market 46
" Salonica Market 47
" Smyrna Market 47
Otto of Rose, Constantinople Market 46
Paint Market 49
Peppermint, Western Market 69
Petroleum Market, United States 55
" " Foreign 66
Quinine, Foreign Review 47
Shellac Market 50
" " Calcutta 51
" " London 51
Sponge Fisheries 48
Talc, Leghorn Market 50
Trade Conditions, Reviews 69
Tragacanth, Constantinople Market 46
Umber, Leghorn Market 50
Vanilla, Tahiti, San Francisco 44
" London Market 45
Vegetable Oils 21

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